DOCUMENT RESUME

ED 347 622 EA 023 953

TITLE	School Improvement Research Series VI, 1991-92.
INSTITUTION	Northwest Regional Educational Lab., Portland, Oreg.
SPONS AGENCY	Office of Educational Research and Improvement (ED), Washington, DC.
PUB DATE	Apr 92
CONTRACT	RP91002001
NOTE	91p.; For an earlier research series, see ED 312 030.
AVAILABLE FROM	Northwest Regional Educational Laboratory, 101 S.W. Main Street, Suite 500, Portland, OR 97204.
PUB TYPE	Reference Materials - Bibliographies (131) -- Reports - Descriptive (141) -- Guides - General (050)
EDRS PRICE	MF01/PC04 Plus Postage.
DESCRIPTORS	Community Cooperation; Curriculum Development; *Educational Improvement; Elementary Secondary Education; Independent Study; Mastery Learning; Quality of Life; *Research and Development; School Community Relationship; Staff Development; Student Improvement; *Teaching Methods; *Theory Practice Relationship; Thinking Skills; Time on Task; Urban Youth; Writing Instruction

ABSTRACT

This loose-leaf compendium includes three types of brief research summaries: "topical synthesis," "close-ups," and "snapshots." The single topical synthesis is entitled "School-Community Collaboration to Improve the Quality of Life for Urban Youth and Their Families" (Kathleen Cotton). Close-ups consist of brief definitions and essential research findings on the following topics: "Teaching Thinking Skills" (Kathleen Cotton) and "Staff Development" (Jocelyn A. Butler). Four snapshots describe effective practices currently in place at various school districts throughout the country: "Learning to Write and Assess Writing Quality" (Kathleen Cotton); "Using School Time Productively" (Kathleen Cotton); "Improving Student Performance through Mastery Learning" (Carole Hunt and Kathleen Cotton); and "Restructuring the Curriculum to Promote Child-Initiated Activity" (Jan Jewett). Annotated bibliographies are appended to the topical synthesis and close-ups. (MLF)

****
*   Reproductions supplied by EDRS are the best that can be made   *
*   from the original document.   *
****

ED347622

EA 023 953

Northwest
Regional
Educational
Laboratory

101 S.W. Main Street, Suite 500 - Portland, Oregon 97204-3297
(503) 275-9500 GTE: NWREL.LAB FAX: (503) 275-9489

Writer's Direct Dial Number

SCHOOL IMPROVEMENT RESEARCH SERIES

SERIES VI
1991-92

1.	TOPICAL SYSTHESIS #5	School-Community Collaboration to Improve the Quality of Life for Urban Youth and Their Families
2.	CLOSE-UP #11	Teaching Thinking Skills
3.	CLOSE-UP #12	Staff Development
4.	SNAPSHOT #21	Learning to Write and Assess Writing Quality
5.	SNAPSHOT #22	Using School Time Productively
6.	SNAPSHOT #23	Improving Student Performance Through Mastery Learning
7.	SNAPSHOT #24	Restructuring the Curriculum to Promote Child-Initiated Activity

April 1992

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it

☐ Minor changes have been made to improve reproduction quality

- Points of view or opinions stated in this document do not necessarily represent official OERI position or policy

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

J. Kirkpatrick

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Table of Contents: Series VI-X

PRODUCTS	**Year/Series**				
	1991-92/Series VI	**1992-93/Series VII**	**1993-94/Series VIII**	**1994-95/Series IX**	**1995-96/Series X**
Topical Syntheses	#5: School-Community Collaboration to Improve the Quality of Life for Urban Youth and Their Families				
Close-Ups	#11: Teaching Thinking Skills				
	#12: Staff Development				
Snapshots	#21: Learning to Write and Assess Writing Quality - James Lick Middle School, San Francisco, CA				
	#22: Using School Time Productively - J.S. Chick Traditional School, Kansas City, MO				
	#23: Improving Student Performance Through Mastery Learning - College Place Middle School, Lynnwood, WA				
	#24: Restructuring the Curriculum to Promote Child-Initiated Activity - South Colby Elementary School, Port Orchard, WA				

SCHOOL IMPROVEMENT RESEARCH SERIES
"Research You Can Use"

Topical Synthesis #5

School-Community Collaboration to Improve the Quality of Life for Urban Youth and Their Families

Kathleen Cotton

> Given the changing makeup of the American family and the additional economic, demographic, and societal pressures that confront today's children and youth, schools cannot be expected to tackle these problems alone.
>
> —Robinson and Mastny: *Linking Schools and Community Services: A Practical Guide*, 1989

> Urban districts are increasingly aware that they cannot combat the most severe schooling problems of central-city children and youth independent of the larger community.
>
> —Oakes: *Improving Inner-City Schools: Current Directions in Urban District Reform*, 1987

Introduction

Theories abound as to why the school reform/restructuring movement of recent years has not made more impressive progress toward its goal of improved academic outcomes for American students. Analysts have cited factors such as insufficient building-level control of school improvement efforts and inadequate staff development provisions for impeding progress toward higher levels of student achievement.

Those who focus on schooling in urban settings, however, point to a more obvious reason: "Recent state reforms have largely bypassed millions of students in urban schools across the nation," notes Cuban (1989), and thus "real school improvement has yet to penetrate most urban schools" (p. 29).

Lack of effort on the part of some urban educators to undertake school improvement projects is only part of the story, however. In many settings, school and district staff have tried very hard to raise student performance through changes in curriculum, instruction, grouping strategies, and other school practices. But even in these settings, success has often been limited.

Increasing numbers of educators and social scientists are now contending that the nation's urban schools need much more than academically oriented change to improve the learning of their students. These analysts argue that the widespread poverty typical of urban schools—and the physical, mental, emotional, familial, and criminal problems often associated with poverty—are the main impediments to school success for many American children.

Northwest Regional Educational Laboratory
101 S.W. Main Street, Suite 500
Portland, Oregon 97204
Telephone (503) 275-9500

School Improvement Program

Sylvester (1990) writes:

> School reform—simply improving the way teachers teach and the ways schools are structured—is not enough. Teachers must now find ways to cope with children who live in dysfunctional families, who are victims of violence, who use drugs, who do not speak English, who are pregnant, who are homeless. Teachers, even the best ones, cannot help these children by themselves (p. 32).

Asked why the reform/restructuring movement has had little effect on outcomes for urban children and youth, analysts such as Cohen (1989) point out that "the school reform movement has not focused on support services—it has focused on academics" (p. 8). These writers assert that addressing the problems associated with poverty calls for greatly expanded support service provisions—trained personnel, financial allocations, and other resources far beyond those available within the educational system.

They argue that schools must, therefore, enter into collaborative arrangements with health and social service agencies and other relevant organizations and institutions in their communities to bring these resources to bear on the multiple and urgent needs of many urban children and their families.

The Need

When discussing the need for school-community collaboration to address a range of problems experienced by students and families, two subjects require attention: (1) the nature of the problems themselves and (2) the current inability of human services organizations, including schools, to respond adequately to these problems.

STUDENT AND FAMILY ISSUES FACING THE SCHOOLS

Anyone who pays attention to television, radio, magazine, and newspaper reports on current social problems knows that today's young people are prey to a large array of negative forces, with urban youth especially at risk. Because these issues have been so widely publicized, only an overview will be presented here.

Driscoll (1990) notes that:

> ...large, urban public schools with the fewest number of socioeconomic advantages...often coexist and compete with a range of urban phenomena that include gangs, high mobility, high rates of unemployment, and remarkably few incentives for economically disadvantaged students to remain in school (p. 4).

Looking at contemporary society and identifying problems that place young people at risk of failure, demographer Harold Hodgkinson (1991) cites:

- A high percentage of babies born to drug- and alcohol-using mothers and/or mothers who receive no prenatal care
- A high incidence of child abuse
- A high incidence of poverty
- Major changes in family structure, most notably a significant increase in single-parent families, which are usually headed by women
- High correlation between lack of education and poverty
- High correlation between lack of education and crime
- High correlation between dropout and prisoner rates.

Hodgkinson concludes that "America's children are a truly endangered species" and that educators alone cannot hope to fix the problem of the underachievement of at-risk children, because their status results to a large extent from their socioeconomic problems (p. 16).

Along the same lines, Reed and Sautter (1990) point out that "more than 12.6 million U.S. youngsters—nearly 20 percent of all children under the age of 18—are poor" (p. 3) and that "the schools need a coordinated and concerted societal effort" to deal with the many serious social problems associated with poverty (p. 8).

A more complete itemization of these social issues is offered by Shedlin in his 1990 article on the need for school-social service collaboration:

- More than 60 percent of mothers with children under 14 are in the labor force. More than half of all mothers with children under a year old are in the labor force.
- Fewer than half of all preschool children are immunized against preventable diseases, and the incidence of infectious childhood disease is rising.
- More than 9 million children have no health care; more than 12 million have no health insurance; 18 million have never seen a dentist.
- More than one-third of all children under 18 do not live with both biological parents.
- Forty percent of the poor in America are children.
- Of the nearly 13 million poor children, more than 40 percent live in families with incomes of less than half the federal poverty level—$12,091 per year for a family of four.
- Fifteen of every 100 children are born in households where no parent is employed; one out of every four children will be on welfare at some point before adulthood.
- Malnutrition affects nearly half a million children.
- Families with children now make up the largest and fastest growing segment of the homeless population.
- An estimated 1.5 million children in the U.S. are homeless as a result of having been cast out of their families.
- In 1986 over 2 million children were reported abused, neglected, or both.
- More than 70 percent of U.S. teenagers have experimented with drugs.
- Approximately half of U.S. teenagers are sexually active by the time they leave high school. Each year nearly half a million teenagers have abortions, and more than half a million give birth.
- Every day nearly 2,000 teenagers drop out of high school [leading to a dropout rate of over 30 percent].
- One thousand young people attempt suicide every day (p. 16).

One could cite many more unsettling statistics about societal problems involving and affecting school-age children and their families. It should be adequate to note that these problems are widespread and that virtually everyone who writes about these problems contends that the schools, by themselves, cannot possibly keep the nation's seriously affected students in school or equip them for success in work or postsecondary education.

THE INADEQUACY OF EXISTING SERVICES

Granting that poverty and other social ills cannot be cured or fully compensated for by the schools, what about those health and social service providers that exist specifically to deal with these problems? Why aren't they and the schools working together successfully to meet the needs of disadvantaged students and their families?

Analysts have identified many reasons. The following list is drawn from the work of Ascher (1990); CCSSO (1991); Farrar and Hampel (1987); Guthrie and Guthrie (1990); Levitan, Mangum, and Pines (1989); Murray and Mess (1986); Naparstek, et al. (1982); Pathfinder (1987); and Robinson and Mastny (1989):

- School staff generally lack information about the range of services available from health and social services agencies in the community.
- Many districts do not have the services of professionals to provide support services except on a minimal level.
- Social service agency provisions are often piecemeal and crisis oriented.

- Service providers are sometimes not aware of one another's existence and/or provisions.

- Social service school staff sometimes fear for their jobs if they refer students to outside agencies.

- Intervention in such areas as pregnancy prevention and psychological counseling is controversial, and school personnel are concerned about parent and community response.

- In school settings, matching students and services is usually characterized by considerable informality; administrators rarely try to coordinate the activities of social service staff, and there is a lack of systematic record keeping.

- The delivery system for the full range of programs is so fragmented that few families obtain all the assistance to which they are entitled.

- Agencies and state departments are limited by their traditional service and professional boundaries.

- Services are often delivered in an inefficient, duplicative, and bureaucratically confusing fashion.

- Social service agencies generally do not acknowledge and utilize informal community helping systems, such as community centers and churches, which could help them reach clients and extend services.

- There are sometimes areas of need which are not addressed by any service provider in a region.

- Health and social service provisions are sometimes offered at times of day and at locations which make them largely inaccessible to those in need.

- Agency personnel are sometimes insensitive to ethnic and cultural backgrounds of clients, which further impedes these people's willingness to seek assistance.

- Conflicting eligibility criteria sometimes function as a barrier to families receiving needed services.

- Legal obstacles prevent organizations such as churches or ethnic clubs from receiving funding, even though they might be ideally situated to provide services or referrals.

- Confidentiality requirements often get in the way of cooperative relationships between schools and community service agencies.

To say that "services are often fragmented," and "coordination is poor" is an abstract way of expressing the problem. What these observations really mean is that, in one fairly typical case study, a disadvantaged California family with school-age children experiencing multiple needs had to appear, complete applications, and tell their story at 17 different locations in order to access all the services for which they were eligible (*Oregonian* 1991). In Arkansas, a family of six was served by 25 different human service professionals (SEDL 1990c).

"The child with multiple needs is like a pinball in a pinball machine bouncing from one place to another," writes Stanford University professor Michael Kirst (*Education USA* 1990, p. 135). Service provisions are excessive and overlapping for some needs (e.g., half a dozen different federal programs provide family planning services), and woefully inadequate in others.

Motivators and Barriers

Probably the single most significant factor motivating schools and community groups (social service agencies, business, neighborhood associations, etc.) to collaborate on behalf of children and families in need is the recognition that resources are scarce and unlikely to become more plentiful in the near future. As Levitan, Mangum, and Pines note in their 1989 proposal for a family-centered service delivery system:

> Though more funds are needed and could be used to good advantage, appreciable increases are unlikely in the current political and economic situation. Hence, it is essential to get the maximum return from each dollar expended (p. 3).

In addition, each segment of the community has its own set of motives for desiring collaboration with the schools.

MOTIVATING FACTORS FOR POTENTIAL COLLABORATORS

The question, "what's in it for us?" is bound to occur to staff of any social service agency or other community organization considering a collaborative relationship with a school or schools in their area. The literature on school-community linkages identifies reasons for the interest expressed by various community constituents in collaborative relationships with schools:

- **Health and social service agencies.** Staff of these agencies greatly value their connections with the schools. Since virtually all young people pass through the schools, schools can provide human service agency staff access to the community's young people and, through them, to families experiencing needs. It has been repeatedly noted that community health and other social service efforts cannot be successfully instituted without the cooperation of schools, local government, hospitals, and community groups (Ascher 1988; Oakes 1987; and Spring 1988).

- **Colleges and universities.** Higher education representatives want to avoid expenditures for remediation and developmental courses and generally believe that supporting improvements in K-12 education is a good investment. Also, they stand to increase their enrollments if they assist in the development of capable high school graduates who value further education. Work with the public schools enables higher education personnel to keep abreast of educational issues and developments and thus avoid accusations of being "out of touch" (Gold 1985).

- **Parents and community members.** These individuals naturally want to assure a wide range of life choices and economic self-sufficiency for the community's young people. In the case of older community members, offering support and sharing experience with young people can increase their sense of worth and productivity (Comer 1986, 1988; Freedman 1988; and Hodgkinson 1991).

- **Business and industry.** Business representatives have cited a variety of reasons for wanting to collaborate with schools, including their desire for a competitive workforce and for a pool of qualified potential employees. According to a 1987 National Alliance of Business report, "the second most often cited reason for a business selecting a particular location is the quality of the schools." Other motivators include a desire to reduce taxes and welfare costs by reducing unemployment and to improve the career development and guidance available to young people.

- **Members of neighborhood organizations** typically support close relationships with the schools as a means of increasing community cohesiveness and gaining support and involvement for community projects.

These and other groups have relationships with the schools that bear on many aspects of school operations. The information base on parent/community involvement in instruction and school governance and the literature on business-school partnerships both detail such relationships and the motivating forces leading to their development. The current investigation does not address these relationships in detail; they are referenced only as they bear on the delivery of needed health, social, and related services to students and families.

BARRIERS TO EFFECTIVE COLLABORATION

If there is a need for collaborative projects to meet the multiple needs of disadvantaged students and their families, and if various community groups see advantages for themselves and for the schools in engaging in such collaboration, then why isn't it happening on a larger scale and with more positive outcomes?

"Interagency cooperation is much like preventive health care," observe Dunkle and Nash: "Everyone believes in it, but few actually practice it" (1990, p. 35). Many educators, social scientists and others have sought to identify and address the barriers present in the current system—or, as Guthrie and

Guthrie characterize it, the "nonsystem' driven by funding concerns and crisis mentality" (1990, p. 1).

Dunkle and Nash assert that "developing integrated relationships [among human service providers] is about as easy as dancing with an octopus, with each agency or organization a 'tentacle.' In looking at a high risk teenager:

- An educator sees a *student* in danger of dropping out;
- A health-care provider sees a *patient* at risk of having a low-birthweight baby;
- A social-service worker sees a *client* who may require public assistance;
- A juvenile justice worker sees a potential *runaway*;
- An employment specialist sees a *trainee* needing multiple services; and
- A community or religious leader sees the troubled *offspring* of a personal friend" (p. 44).

These "categorical or discrete definitions of problems," (SEDL 1990b, p. 2) result in programs being given responsibility to address only one problem area or one audience. This, in turn, gives rise to several related barriers to collaboration, as identified by Gold (1985):

- **Organizational autonomy**. Collaboration poses a challenge to the organizational habit of setting priorities without regard to the perspectives of other organizations.
- **Singular perspectives**. The tendency of each organization to have a very limited view of clients and their needs can impede collaboration, as does the use of jargon that is not meaningful outside each organization's narrow confines.
- **Differing mandates and procedures**. These can lead to a lack of understanding and/or respect for the constraints under which other organizations must operate.
- **Competing/adversary relationships**. Social service organizations may be in competition with one another for clients or funds, be charged with evaluating each other's performance, or have a history of friction with one another—all of which can be expected to interfere with collaboration.

"No one," observes Weiss (1984), "will admit that he or she *does not want cooperation* or a working partnership" (p. 2). Yet, as Dunkle and Nash point out with reference to the lack of incentives for collaboration:

> Staff members and agencies are rewarded when they win more funds—and more services and programs—for their department. But they are typically not rewarded for identifying needed services in another department or organization, even when those other services are exactly what should help an at-risk young person succeed" (p. 35).

Even when schools, social service agencies, and other organizations overcome their initial resistance to sharing information and pooling at least some of their resources, other barriers often present themselves. Guthrie and Guthrie (1990), Pathfinder (1987), Robinson (1985), and Weiss (1984) invite potential collaborators to watch out for pitfalls such as:

- **No action; talk only.** Gatherings become gripe sessions and participants fail to stay focused on tangible results.
- **Agency representatives create another layer of bureaucracy** by forming an interagency "czar" or "superagency," and the focus on service delivery is lost.
- **One agency dominates** proceedings, leaving other members feeling they have little influence.
- Some members' participation is characterized by **competitiveness, cynicism, a preference for working alone**, and/or **hidden agendas** for personal advancement.
- Efforts may be afflicted by the **"Terrible T's"**—Tradition, Turf, (lack of) Trust, (lack of) Time, and Trouble (feeling it is too much trouble to overcome complacent and resistant attitudes).

Of the prospect of true collaboration—among social service agencies and between these agencies and the schools—Sylvester (1990) writes:

> It sounds remarkably simple. It is remarkably difficult. In order to provide ... comprehensive and cohesive services to at-risk children and their families ... the school and social service bureaucracies must overcome years of differing traditions. People who have never worked together must form teams. Schools must open their doors to outsiders, and social service agencies must relinquish control of some activities. Then, in order to make it all work on a large-scale basis, there must be fundamental institutional changes in the way programs are funded, in the way professionals are trained, and in the way outcomes of education and social service programs are measured (p. 33).

Approaches to Community Collaboration: Governance Structures and the Sense of Community

Clearly, the barriers to effective interorganizational collaboration on behalf of disadvantaged families are formidable. Still, those seeking to develop and implement collaborative projects have a wealth of validated structures to consider—structures that reveal the many ways that community groups have organized themselves to meet the needs of children and families in need.

STRUCTURES FOR COMMUNITY COLLABORATION

The following types of governance structures have been used for interagency collaborations undertaken for a wide variety of purposes, including substance abuse prevention; career education; the delivery of public services, public works, and facility management; and expansion of low-cost housing, as well as the provision of health and social services to disadvantaged students and their families. Collaborations utilizing these different structures are cited in the work of Boulter (1990); Chavis and Florin (1990); Florin (1989); Gold (1985); Kotler (1982); Spring (1988); Williams (1989); and Woodson (1982):

- **Lead agency**. A single community agency or organization serves as the nodal point and primary liaison for activities.
- **Coordinating council**. This group provides a structure in which information is distributed and attempts are made to coordinate services among service delivery agencies or organizations.
- **Professional advisory committee**. This group supplies professional advice and sometimes services; members include respected professionals who have legitimacy in the community.
- **Steering and policy committees or boards**. This group provides governing/planning functions for a larger collective body or organization.
- **Task force**. A task force is the implementer of particular program activities and often consists of both professional and nonprofessional members.
- **Grassroots community organizations**. These are informal voluntary structures that are locally initiated by residents responding to particular concerns and conditions. These groups build upon people's commitment to their own turf and translate the abstract concept of community into concrete reality.
- **Networks**. These are loosely structured linkages among groups and organizations that share commitment to a particular community issue. Networks have no formal leadership structure. They encourage the sharing of ideas, experiences, and strategies.
- **Coalition/collaboration**. These are formal alliances of organizations that have come together to work for a common goal.
- **Co-production**. City government and neighborhood organizations divide service delivery responsibility into component tasks which are then parceled out to each, e.g., via service contracts.

Successful projects, it turns out, may utilize any of these structures or a combination of them. The choice of structure is likely to be determined based on the nature of the community which will be involved in organizing and receiving services. As noted in the Southwest Educational Development Laboratory's *INSIGHTS* newsletter (1990a):

> Programs that successfully link education, health, and human services tend to [be characterized by] organizational models that reflect the needs of the communities they serve (p. 3).

And, as indicated by Ascher (1990):

> It is ... commonly agreed that the best school-human service collaborative programs are locally defined and arise out of a community's own peculiar history, strengths, interests, and needs (p. 2).

THE SENSE OF COMMUNITY

To elaborate on this last point, those who have studied successful examples of interagency collaboration within communities often point out that the *sense of community* itself is a critical element in the success of these projects. That is, the presence of characteristics that cause people (as individuals and as members of organizations) to feel a sense of community membership is likely to increase their commitment to collaboration and enhance their effectiveness as collaborators. Thus, although it is outside the scope of this paper to review the sociological literature on community consciousness and community development, it is worthwhile to import a few key concepts from this literature to the present discussion.

What makes for a sense of community? Chavis, et al. (1986) and McMillan and Chavis (1986) tell us that a sense of community is derived from perceptions of membership, influence, fulfillment of needs, and emotional connection.

- **Membership** includes a sense of boundaries, emotional safety, sense of belonging, and personal investment. These aspects work together to determine who is part of the community and who is not.

- **Influence** refers both to the community's power to affect the individuals and organizations within it and to the power of the individuals and organizations to affect decisions which have communitywide impact.

- **Fulfillment of needs** refers to the members of a community having values and needs that are similar enough to one another that the community as a whole can organize its need-meeting activities and set priorities.

- **Shared emotional connection** pertains to the capacity of a community to give its members positive ways to interact, important events to share, positive means of resolving events, and opportunities to honor members.

Put more simply, Florin and Chavis (1990) write that "a sense of community is a perception that members have of belonging and being important to each other" (p. 3).

In the context of discussing the power inherent in urban neighborhood organizations to effect positive change, Hallman (1984) offers several definitions and descriptions of "community," concluding with his own:

> ... people within a limited territory possessing shared values, common interests, and norms of conduct, engaging in social interaction and mutual aid, and having their own groups, associations, and institutions to help meet their basic needs (p. 34).

However, Florin and Chavis (1990) also point out that:

> Because 'community' has traditionally been defined in geographic terms, community development has traditionally centered on territorial communities. But community can also be defined nonterritorially. Transportation and communications have allowed people to form their own communities of interest (p. 2-3).

The emergence of nonterritorial "communities of interest" is an important consideration. It is increasingly commonplace for geographically separated schools, families, and institutions to see themselves as comprising a community and to undertake collaborative projects. This is most often the case when students from different parts of a city come to a given school for reasons such as magnet program participation, other special schooling needs, or desegregation mandates.

Some Promising Practices

According to the Council of Chief State School Officers report, *Joining Forces: Linking Education and Human Services to Help Children and Families at Risk* (1989), at least 30 states have called for some interagency action on dropout prevention and related issues. The report catalogs approximately 200 programs linking education, social welfare, and sometimes other types of agencies. Activities cover a broad range, including mandates calling for interagency agreements; conferences and other gatherings promoting collaboration among children's services professionals; projects linking education with welfare, community services, and housing; and projects that provide training for school staff members and/or resource materials for their use.

Of the school-community collaborations itemized below, some, such as the New Jersey School-Based Youth Services Program, are large-scale efforts, while others, such as the San Diego New Beginnings Project, currently involve only a few schools. Some, such as James Comer's Child Study Center projects, show very positive results, while most others either show mixed results or are too new to have been thoroughly evaluated. All, however, involve bringing together school personnel with health/social service staff—and sometimes people from the private sector and other organizations as well—to work together to meet the needs of the disadvantaged. The list is far from exhaustive, but is representative of the kinds of projects currently in operation around the U.S.:

- **New Jersey School-Based Youth-Services Program**. Administered by the State Department of Human Services in collaboration with the Departments of Education, Labor, and Health, this program was launched in response to the multiple problems afflicting the state's urban teenagers. Districts applying for state monies must detail plans for working with local agencies offering services relevant to local needs. Sites (which must be in or near a school) offer individual and family counseling, recreational, health, substance abuse, and job counseling/placement services; some also offer day care for teen parents, dropout recovery services, or referrals for such services (Cohen 1989; Sylvester 1990).

- **Yale University Child Study Center School Development Program**. Originally developed in 1968 and piloted in New Haven, Connecticut schools, this program is now implemented in over 50 schools around the country. Intended to assist low-SES children who are not developmentally ready to benefit from traditional school structures and methods, the program utilizes a Mental Health Team (principal, social worker, psychologist, and special education teacher), a School Governance and Management Team, a Parents Program, and a Curriculum and Staff Development Program (Comer 1986, 1988).

- **Maryland's Interdepartmental Committee on Teenage Pregnancy and Parenting**. The Departments of Education, Health, Human Resources, Employment, and Juvenile Services, as well as the governor's councils on children and adolescent pregnancy jointly administer a grant program to fund local teenage-pregnancy committees to undertake a variety of local projects, including staff training, development of teen drama groups, and development of service directories (Dunkle 1989).

- **San Diego New Beginnings Project**. City and county personnel, the community college district, and the San Diego City schools fund centers which provide a variety of services to families, including physical examinations, job training, food stamps, and eyeglasses. The centers offer families "one-stop" registrations for all the social services for which they qualify. Centers are staffed by social workers, counselors, and nurses (CCSSO 1991; *Education USA* 1990; *Oregonian* 1991).

- **Illinois Ounce of Prevention Fund**. Established in 1982 and jointly funded by the Department of Children and Family

Services, the Illinois State Department of Education, and the Public Health and Public Aid Departments, this collaborative administers 40 programs which provide health, social, recreational, and educational services to families at central locations. Comprehensive school-based clinics, teen parent programs, and child development programs are a few of the Fund's service provisions (*Education USA* 1990).

- **Elder Mentors Programs**. Programs such as Teen Moms (Portland, Maine) and School Volunteers (Boston, Massachusetts) involve older citizens who volunteer assistance and guidance to teenage mothers, jail-bound young offenders, and students in danger of dropping out of school. Connections provide counseling, social support, role models, and most of all, friendship. Evaluations indicate that intergenerational relationships formed through these programs enhance young people's resilience and capacity to cope successfully with life stresses (Freedman 1988).

- **Los Angeles Focus on Youth Projects**. Multidisciplinary teams (typically composed of teachers, principals, school psychologists, counselors, parents, and social service agency representatives) coordinate school and community services to provide health and social services and keep young people in school. Among the services provided are family and pregnancy counseling, crisis intervention, job training and placement, tutoring, gang diversion, health and child care, recreation, and other assistance. Funding is provided to projects at 16 elementary, junior high, and senior high schools through collaboration of the school district, the private sector, and local community agencies (McCurdy 1990).

- **Oklahoma County Coalition of Citizens and Professionals for Youth**. To ensure comprehensive service delivery, this coalition, made up of representatives from education, social services, juvenile justice, mental health, medicine, and law enforcement, has sponsored legislation affecting truancy laws, the sharing of confidential information among service providers, the development of family support centers, the formation of a youth advisory council, and a referral center for truant students (SEDL 1990c).

- **Arkansas Cornerstone Project**. This project develops neighborhood centers where parents, youth, and professionals meet to plan and work together in a variety of programs, including parenting skills, child care, drug and alcohol prevention and treatment, personal growth, educational enrichment, preventative health services, and referral services. Public and private agency personnel, members of community organizations, representatives of employer and employee associations, and service recipients collaboratively plan and carry out service delivery (SEDL 1990c).

- **Chatham County-Savannah Youth Futures Authority**. Funded with state monies, local in-kind contributions, and matching funds from the Annie E. Casey Foundation of Greenwich, Connecticut, this program serves middle school students identified as at risk of dropping out and their families. A cadre of caseworkers serve as liaisons between the school and the families, determining what services families are getting and which are still needed, then developing coordinated plans to meet student and family needs. Participating students attend smaller classes, pursue individualized learning plans in remedial basic skills labs, and work with adult mentors (Sylvester 1990).

- **Kentucky Integrated Delivery System (KIDS)**. Designed by the state Cabinet of Human Resources in response to a mandate by the governor, this initiative assists communities in delivering available health and human services at school sites. The initiative has led to the creation of a network of Family and Youth Service Centers throughout the state (CCSSO 1991).

- **Presley-Brown Interagency Children's Services Act**. School districts participating in a three-year effort to coordinate health and human service delivery to California students may request a waiver of any state regulations which hinder efforts to link services. The act was sponsored by the Coalition for

Children together with a group of child-serving agencies under the leadership of the California State Department of Education (CCSSO 1991).

- **Florida Interagency Student Services Program.** Authorized by the state legislature and implemented by the State Department of Education, this program provides grants and assistance to middle schools to enable them to offer school-linked health and social services. The program is currently working with several school districts and universities to design an evaluation instrument to assess the effectiveness of the school-based programs (CCSSO 1991).

- **Oklahoma Early Intervention Plan for Children with Special Needs.** Six regional centers have been established which pool resources from the State Departments of Education, Health, Mental Health, and Human Services to provide an array of health and social services to families in need (SEDL 1990c).

- **Alachua County (Florida) Program.** County schools, together with state social service agencies and the University of Florida Medical School Department of Pediatrics, coordinates service delivery to children and their families through a "one-stop shopping" service center. Services provided on site include health care for pregnant women and their babies, high school and adult education courses for parents, nutrition and medical services, preschool and latchkey programs, and after-school care. The program was launched with a combination of state start-up funds and the reallocation of existing resources (Shedlin 1990).

- **San Jose (California) Success Team Schools.** A pilot program in three elementary and two middle schools provides services for children and families at school sites. Counseling, health services, and parent education services are available, as well as an array of services to help children succeed academically. Foundations and community agencies provide funding and in-kind services, and improved coordination of services is expected to bring about better use of existing funds (Shedlin 1990).

Critical Elements of Succesful School-Community Linkages

As part of their analyses of projects like these, many educators and sociologists have identified what they believe to be the essential features of those collaboratives which are achieving success in meeting their objectives. The following program characteristics are identified in the work of Ascher (1990, 1988); Cohen (1989); Committee for Economic Development (1987); Gold (1985); Guthrie and Guthrie (1990); SEDL (1990a,b); and Sylvester (1990):

- They are comprehensive and intensive, either directly offering a wide array of services, or providing an easy entry point to services.

- They move beyond crisis management and even early intervention to focus on prevention and development.

- They are staffed by professionals who are knowledgeable about children and youth, and they are child-centered, putting the needs of the child above institutional or other concerns.

- They deliver services to families; the child is treated as a member of a family, and the family is treated as a member of a community, so that a family unit, rather than a group of individuals, is served.

- They provide a range of professionals—from nurses to teachers to psychologists—who function as a team and build trusting, respectful relationships with those served.

- They frequently make use of case managers who serves as liaisons between children/families and the various agencies providing services.

- Staff are given the time, training and skills—including multicultural awareness and communication skills—to establish and maintain these sustained and supportive relationships.

- They are characterized by shared governance and mechanisms which span political and organizational boundaries.

- Their funding is shared among collaborators, and restrictions on funding are loosened.

- They are results oriented and accountable to participants, families, and the general public.

- They cross long-standing bureaucratic and professional boundaries—often providing services in nontraditional settings and at nontraditional hours.

- They have meaningful support from people in positions of power and influence.

- They respond to local needs; no one administrative arrangement or service setting fits every situation.

- There is evidence that small programs work best. Massive programs run the risk of becoming wrapped in bureaucratic anonymity and red tape and thus of depersonalizing problems that involve basic human needs.

- They are flexible, going beyond the rigid rules and procedures that keep services fragmented and overlapping.

- They are voluntary; participants are involved because they perceive mutual benefit for those engaged in the effort, not because they are required to be.

Recommendations for School-Community Collaboration

Having identified common characteristics across successful programs, analysts have gone on to offer recommendations to others who want to engage in collaborative activities. The following experience-based suggestions are divided into those related to policy and those related to the collaborative process.

RECOMMENDATIONS REGARDING POLICY

These are drawn from the work of Clasby (1979); Committee for Economic Development (1987); CCSSO (1991); and SEDL (1990b):

Federal Government:

- Policies should be revised so as to reduce the proliferation of mandated advisory groups, increase flexibility to accommodate variations in state and local needs, and strengthen federal mandates and incentives for community involvement.

- The federal government should set the tone and direction for change by establishing and funding demonstration projects in early childhood education, dropout prevention, and other programs targeted to improve the quality of education for children in need.

- Federal policymakers should also waive regulations to enable service providers to be able to mobilize the resources needed to serve children and families.

- Federal representatives should provide leadership in interagency collaborations by:

  —Establishing state-level coalitions of agencies, teachers, parents, students, the private sector, and foundations to plan and evaluate policy approaches that will support local efforts

  —Establishing information systems for sharing information and data for planning.

State Government:

- Interagency efforts should be initiated or formally endorsed by the governor and state legislature in order to insure participation of all relevant agencies and organizations.

- Cost sharing among participants of linkage programs should be promoted (e.g., repositioning staff from one agency to another or to the school).

- State policymakers should mandate interdisciplinary training of classroom teachers and social workers in teacher preparation programs and schools of social work.

- These professionals-in-training should also receive training in multicultural awareness and communications to strengthen their effectiveness in working with students and families from diverse backgrounds.

- Inservice workshops and training should be provided to classroom teachers and community agency workers on social issues which impact students and clients and on strategies for effectively dealing with these problems.

Local Government:

- Resources for incentive (seed) grants to local community organizations should be made available.

RECOMMENDATIONS REGARDING OPERATIONS

These recommendations are identified in writings by Ascher (1990); Bain and Herman (1989); Benard (1987); Florin and Chavis (1990); Guthrie and Guthrie (1990); Institute for Educational Leadership (1986); Pathfinder (1987); Reed and Sautter (1990); Robinson and Mastny (1989); SEDL (1990 a,b,c); and Weiss (1984):

- Define the community—Who will be served? Who will be the service providers? What other organizations and individuals should have input into the program or project?

- Involve all key players. This not only breaks down the isolation of the school, but also creates a broad sense of ownership and commitment. In addition to social service agencies, health organizations, juvenile justice, and so on, reach out to:

  —Community groups—civic, cultural, economic, fraternal, governmental, patriotic, political, professional, religious, retirement, welfare, and youth, as well as established school liaison groups such as the PTA, neighborhood associations, citizen advisory committees, and alumni groups

  —Parents. Invite parents to meetings, give them key roles on task forces and subcommittees, and involve them in special events.

- Establish a structure that utilizes cooperative funding—contributions of financial support and/or sharing of space, facilities, and resources, including personnel.

- Obtain commitment from top-level officials in each key collaborating organization.

- Concentrate initially on issues whose mutual relevance and importance is readily apparent.

- Provide training on the collaboration process, and make participants aware of the attributes of successful collaborative projects undertaken in other settings.

- Develop a plan.

  —Vision: Envision how you would like to see children served and agencies interacting. Identify ways that services might be made more comprehensive, preventive, child-centered, and flexible.

  —Goals and expectations: Identify outcomes you can reasonably expect for children and changes you foresee in how agencies interact.

  —Roles: Determine roles and responsibilities of each participating agency; do this with an eye to the capabilities, legal constraints, etc. of each participant.

  —Evaluation: Plan evaluation activities at the beginning. Evaluate both the quality of services to children and the quality of the collaborative process.

- Conduct a review of what needs are already adequately met, and what services are already in place; then identify remaining areas of need.

- Maintain a system for careful record keeping.

- Plan for and conduct long-term evaluation of program success and the progress of participants.

- Build, where possible, upon successful past collaborative experiences.

PROVIDING SERVICES AT SCHOOL SITES

Proponents of school-agency linkages hold different points of view about whether school buildings ought to be the sites for providing services to students and families. This issue is raised in the work of Ascher (1990); Shedlin (1990); and SEDL (1990a), among others. Those who favor school-based service delivery offer the following arguments:

- Because all children have to attend school, schools are the "most accessible, appropriate, and accountable institutions for establishing collaboratives" (Ascher 1990, p. 1).
- Schools are usually geographically accessible and familiar to community residents.
- Schools are the primary, and often the only, community institutions seen as positive and neutral.
- Schools are concerned with students' overall development; therefore, it is logical for them to coordinate students' contact with human service agencies.

Others, meanwhile, contend that services should be housed in locations other than schools, because:

- Schools should not invade areas that are the proper domain of parents, and placing schools in a service coordinator role may inappropriately increase their control over students' lives.
- Neighborhood schools have become rare, due to such things as federal desegregation court orders or children attending particular schools because of special needs.
- Schools should not be expected to solve societal problems.
- School staff members are already overworked and, in any case, are not trained to deliver social services.
- Schools can be difficult institutions for other professionals to interact with, since established school practices sometimes work against collaborative approaches.

The truth is that some successful collaborative projects are school based and some are not. It appears that the placement of such services is yet another matter that should be left up to the discretion of collaborators in each local community. Who houses the services seems to be less important than assuring that resource provision and decision making are shared.

BUILDING SELF-SUFFICIENCY

Another emerging theme in the work of those who support school-community linkages is that programs should move client families in the direction of self-sufficiency, rather than fostering their dependence, as some assistance programs have tended to do. This view is supported in a recent piece of federal legislation called the Family Support Act of 1988 (*New Partnerships* 1989). Proceeding from the philosophy that social welfare systems should help families to become self-sufficient, the legislation mandates:

- Enforcement to assure that child support payment obligations are met by absent parents
- Education and basic skills training for welfare recipients
- Expanded federal funds for child care services for parents receiving Aid to Families with Dependent Children
- Transition support as participants leave assistance programs for employment
- The provision of limited assistance to unemployed two-parent families.

Another aspect of developing self-sufficiency in disadvantaged populations is described in the work of Freedman (1988); Benard (1991); and Gibbs and Bennett (1990). These authors cite research showing that programs which increase young people's exposure to "protective factors," such as expressions of adult concern and caring and opportunities to contribute to group well-being, are very effective in increasing those young people's resiliency, self-determination, and success. Participants in such programs have been found to have lower rates of drug/alcohol use, teenage pregnancy, delinquency, and dropping out than would be expected given the stresses and disadvantages which characterize their lives. Development of school-community programs aimed at reducing risk factors and increasing protective factors in the lives of these youth is therefore encouraged.

THE CRITICAL ROLE OF COMMUNITY RESIDENTS

Finally, the literature on interagency collaboration repeatedly reminds program planners that real and lasting improvement in a community's quality of life requires meaningful involvement of community residents themselves. We have repeatedly noted that the "best" structure for collaboration depends on the nature of the community to be served. Moreover, successful programs draw upon the wisdom and strength of community inhabitants in planning and operating programs. This seems obvious, and yet Naparstek, et al. (1982) remind us that:

> One of the chief shortcomings of most federal programs has been the failure to base mental health, human services, and community and economic development initiatives on the strengths, resources and diversities existing in local communities. Community organizations and organizational and cultural networks that have the capacity to support people in need are bypassed (p. 54).

Woodson (1982) underscores the critical role of community residents in improvement efforts:

> In countless communities ... individuals, churches, and neighborhood organizations have succeeded where large-scale programs have failed to solve, or even to address, a specific community problem (p. 138).

And Hallman (1984) reports findings that ought to have a humbling effect on those who would presume to "fix" the local community through the machinations of outside "experts":

> ... individual reports suggest that the help received from family, relatives, and neighbors is about as helpful as that received from professionals and, in some instances, more helpful (p. 21).

When "helping" programs try to operate without the informed viewpoints and resources that community members can bring to bear on meeting their needs, those programs generally alienate the community and fail to ameliorate the problems they were designed to address. It is a source of frustration to many analysts that our society continues to overlook the wisdom and experience of members of disadvantaged communities regarding the issues that affect them. In his discussion of effective community-based programs, Woodson says:

> The success of these individuals or organizations has been recognized by community residents, documented by statistics collected by the police, and given official sanction when city agencies contract with these groups for services. Community programs and projects are studied by experts. Their leaders are interviewed by local and national media. Yet when a major social crisis erupts...rarely if ever are these leaders included in the task forces and conferences following the disruption (p. 139).

Community-based improvement projects need the involvement of educational, health, social service, and other professionals in order to succeed; but they also need to be grounded in faith in the people who reside in the community—faith in their judgment, motivation, and goodwill.

Woodson's words on this subject will serve to conclude the present discussion:

> A new societal policy should be based on the conviction that the best interests of people cannot be determined by outside experts, however benevolent in intention. Benevolence, or compassion, is an insufficient premise for public policy....The poor should not serve the purpose of providing therapeutic outlets for the compassionate aspirations of other classes; nor should they serve as the power base for those who profess to represent their interests or as the subjects of social experiments. Social policy must be founded on trust among people and in their innate capacity to help themselves (p. 140).

References

Ascher, C. "Linking Schools With Human Service Agencies." *ERIC Clearinghouse on Urban Education Digest* 62 (1990): entire issue.

Discusses the need for school-social service agency collaboration and provides an overview of the kinds of collaborations initiated in communities around the nation. Identifies the major characteristics of successful collaboratives.

Ascher, C. *Urban School-Community Alliances. Trends and Issues No. 10.* New York: ERIC Clearinghouse on Urban Education/Institute for Urban and Minority Education, 1988.

Discusses the need for, nature of, and results produced by collaborative projects involving urban schools and other organizations, including business, health and social service agencies, arts and cultural institutions, and universities and colleges. Also identifies research needs regarding such projects.

Bain, J. H., and Herman, J. L. *Improving Opportunities for Underachieving Minority Students: A Planning Guide for Community Action.* Los Angeles, CA: UCLA Center for the Study of Evaluation, 1989.

Offers guidelines for school personnel to use to engage community support and work with community groups to improve schooling outcomes for low-achieving minority students. Includes sample letters, planning and record keeping forms.

Barnes, R. W. *An Evaluation of the Youth Awareness Program (YAP), School Year 1983-84.* Washington, DC: District of Columbia Public Schools, September 1984. (ED 250 415)

Describes the nature and outcomes of a collaborative program of the DC schools and the Metropolitan Police Department which focused on helping secondary students to make appropriate decisions about sex, drugs, crime, and careers. The program had a significant positive impact on both students' level of knowledge and their attitudes.

Benard, B. *Fostering Resiliency in Kids: Protective Factors in the Family, School, and Community.* Portland, OR: Western Regional Center for Drug-Free Schools and Communities, August 1991.

Discusses factors which research has shown to foster resiliency in young people growing up in stressful circumstances and enable them to succeed rather than falling prey to negative social forces.

Benard, B., and Fafoglia, B. "Knowing What to Do—and Not to Do—Reinvigorates Drug Education." *ASCD Curriculum Update* 29/2 (1987): 1-12.

Discusses effective and ineffective approaches to preventing/reducing drug and alcohol use among school-age young people. Identifies ways that schools and communities need to work together to increase the effectiveness of prevention programs.

Boulter, R. O. "Building a Balanced Community: Jubilee Housing." *The World & I* 5/10 (1990): 501-511.

Describes the history of Jubilee Housing, Inc., a nonprofit housing corporation in Washington, DC, which has grown from a modest community volunteer effort in the late 1960s to an extensive, successful and largely resident-operated organization serving low-income renters.

Bruner, C. *Thinking Collaboratively: Ten Questions and Answers to Help Policy Makers Improve Children's Services.* Washington, DC: Education and Human Services Consortium, 1991.

Uses a question-and-answer format to provide guidance to state and local policy makers regarding ways to foster collaboration to benefit children and families. Includes resource listings for those seeking more in-depth information.

Bryk, A. S., and Driscoll, M. E. *The High School as Community: Contextual Influences and Consequences for Students and Teachers.* Madison, WI: National Center on Effective Secondary Schools, University of Wisconsin-Madison, November 1988.

Analyzes data from the High School and Beyond Study to identify factors which make up a sense of community in secondary schools, and identifies the effects of a sense of community—or the lack of it—on students and teachers.

Chavis, D. M., and Florin, P. *Community Participation and Substance Abuse Prevention: Rationale, Concepts, and Mechanisms.* San Jose, CA: Bureau of Drug Abuse Services, County of Santa Clara, May 1990.

Covers some of the same concepts as the authors' paper on community development for substance abuse prevention (see Florin, below), as well as offering definitions of key terms and descriptions of various structures for community participation.

Chavis, D. M.; Florin, P.; and Felix, M. R. J. "Nurturing Grassroots Initiatives for Community Development: The Role of Enabling Systems." *Administration in Social Work* (1990, in press).

Presents a rationale and guidelines for the development of "enabling systems"—structures which can expand and increase the effectiveness of citizen involvement in community organizations. Identifies types and functions of enabling systems, including brief descriptions of actual, currently operating systems.

Chavis, D. M.; Hogge, J. H.; McMillan, D. W.; and Wandersman, A. "Sense of Community Through Brunswik's Lens: A First Look." *Journal of Community Psychology* 14/1 (1986): 24-40.

Presents and tests a Sense of Community Index that permits users to determine the relative influence of various factors on the overall perception of a sense of community. Findings support the theory that a sense of community is derived from perceptions regarding membership, influence, fulfillment of needs, and emotional connection.

Chavis, D. M., and Wandersman, A. "Sense of Community in the Urban Environment: A Catalyst for Participation and Community Development." *American Journal of Community Psychology* 18/1 (1990): 55-81.

Presents a model which shows that having a sense of community can influence people's perception of the community environment, their social relations within the community, and their perception of control and empowerment in such a way that they are more likely to participate in voluntary community organizations.

Chenault, J. "Career Education as a Community Process." *Journal of Career Education* 9/3 (1983): 192-202.

Discusses the evolution of career education from a traditional, school-based effort to a collaborative community effort that includes the school as one of the participants. Includes a description of different models of community-based career education.

Clasby, M. *Community Perspectives on the Roles of the School in the Community. IRE Report No. 3.* Boston, MA: Institute for Responsive Education, 1979.

Reports on a series of 15 interviews conducted with citizens experienced in school-community relations at five sites: Washington, DC; Sacramento, CA; Tuskegee, AL; Boston, MA; and Philadelphia, PA. Respondents discussed progress and problems in school-community relations and offered recommendations for strengthening these relations.

Cohen, D. L. "'Joining Forces': An Alliance of Sectors Envisioned to Aid the Most Troubled Young." *Education Week* 8/25 (March 15, 1989): 7-14.

This series of articles discusses a Council of Chief State School Officers report on collaborative programs involving schools, health agencies, and social service agencies across the nation. Also presents a rationale for such collaborations, describes some of the programs, and identifies key elements of successful projects.

Comer, J. P. "Educating Poor Minority Children." *Scientific American* 259/5 (1988): 42-48.

Describes the Yale University Child Study Center program, which enhances young children's ability to succeed in school through close parent-school alliances and the work of a mental health team and a governance and management team.

Comer, J.; Haynes, N. M.; Hamilton-Lee, M.; Boger, J. M.; and Joyner, E. *Yale Child Study Center School Development Program: Developmental History and Long Term Effects.* New Haven, CT: Child Study Center, Yale University, 1986. (ED 283 910)

Describes this long-running public school-university cooperative school improvement program and cites research indicating steady progress in the achievement and other outcomes of the poor, inner-city, predominantly black students attending the Connecticut schools in which the program has been implemented.

Committee for Economic Development. *Children in Need: Investment Strategies for the Educationally Disadvantaged.* New York: Research and Policy Committee, Committee for Economic Development, 1987.

Identifies the need for improved educational and other services for America's disadvantaged school population. Outlines a reform strategy which specifies roles for federal, state, and local authorities and which focuses on prevention/ intervention for pregnant and parenting teens and their young children, school restructuring, and retention/re-entry for dropouts and potential dropouts

Cotton, K. *Educating Urban Minority Youth: Research on Effective Practices. Topical Synthesis #4.* Portland, OR: Northwest Regional Educational Laboratory, 1991.

Summarizes findings from 61 research studies and reviews about educational practices which are beneficial—and those which are harmful—to urban minority students. Includes recommendations drawn from the research.

Council of Chief State School Officers. "A Concern About...Promoting School-Linked Approaches to the Delivery of Effective Health and Social Services for Youth and Families." *Concerns* 33 (June 1991): 1-9.

Outlines the need for school-linked services for families in need, together with a discussion of the barriers to efficient service delivery and the policy and operational issues involved in removing these barriers.

Cuban, L. "At-Risk Students: What Teachers and Principals Can Do." *Educational Leadership* 46/5 (1989): 29-32.

Argues that school improvement and reform have largely bypassed urban schools and presents research findings concerning educational practices which promote success for students in these schools.

Driscoll, M. E. "The Formation of Community in Public Schools: Findings and Hypotheses." *Administrator's Notebook* 34/4 (1990): entire issue.

Reviews data on 357 public, private, and Catholic schools to identify the components which make up a "sense of community" within schools. Found that both large size and low socioeconomic status work against the development of a sense of community.

Dunkle, M., and Nash, M. "Creating Effective Interagency Collaboratives." *Education Week* 8/25 (March 15, 1989): 44, 35.

Discusses the need for interagency collaboration to address the needs of at-risk youth and outlines approaches which can lead to successful collaboratives.

Education USA 32/19 (January 8, 1990): 135-142. Special Issue: Children's Services.

Focuses on links being established among governmental, health, social welfare, and educational agencies across the United States.

Farrar, E., and Hampel, R. L. "Social Services in American High Schools." *Phi Delta Kappan* 69/4 (1987): 297-303.

Discusses the serious problems and needs of today's teenagers and the ways that social service providers in the nation's high schools respond to these needs and problems. Typical patterns of organization for social services provision indicate a lack of coordination.

Florin, P. *Nurturing the Grassroots: Neighborhood Volunteer Organizations and America's Cities*. New York: Citizens Committee for New York City, Inc., 1989.

Discusses the attributes of volunteer neighborhood groups and gives examples of various groups and their achievements in areas such as bringing about physical improvements and fighting crime and drugs. Includes a description of the operations and achievements of the Citizens Committee for New York City.

Florin, P., and Chavis, D. M. *Community Development and Substance Abuse Prevention*. San Jose, CA: Bureau of Drug Abuse Services, County of Santa Clara, May 1990.

Reviews the concept of community development, describes the contributions a community development approach can make to substance abuse prevention, and suggests mechanisms for linking community development and substance abuse programs.

Florin, P. R., and Wandersman, A. "Cognitive Social Learning and Participation in Community Development." *American Journal of Community Psychology* 12/6 (1984): 689-708.

Tests an approach to predicting and understanding resident participation in community development efforts through membership in neighborhood block associations.

Florin, P.; Chavis, D.; Wandersman, A.; and Rich, R. "A Systems Approach to Understanding and Enhancing Grassroots Organizations: The Block Booster Project." In R. Levine and H. Fitzgerald (eds.). *Analysis of Dynamic Psychological Systems*. New York: Plenum, 1991.

Discusses the systems framework used to conceptualize the functioning of voluntary community organizations (VCOs), summarizes findings about the viability of these organizations, reports outcomes of the Booster Block interventions, and discusses implications for working with other VCOs in the future.

Freedman, M. *Partners in Growth: Elder Mentors and At-Risk Youth. Executive Summary*. Philadelphia, PA: Public/Private Ventures, 1988.

Discusses exemplary intergenerational programs through which older citizens are providing assistance and guidance to teenage mothers, jail-bound young offenders, and students in danger of dropping out of school.

Gibbs, J., and Bennett, S. *TOGETHER WE CAN Reduce the Risks of Alcohol and Drug Abuse Among Youth: A Framework for Community Prevention Planning*. Seattle, WA: Comprehensive Health Education Foundation, 1990.

Provides background information on and suggestions for developing school-community approaches which can reduce the likelihood of drug and alcohol use by the community's children and youth.

Gold, G. G. *Collaborate with the Community. Module CG A-3 of Category A-3 of Category A—Guidance Program Planning. Competency-Based Career Guidance Modules*. Washington, DC: Office of Vocational and Adult Education, 1985. (ED 257 978)

Offers information to help guidance personnel to increase their knowledge and skills in linking community-based career guidance programs with education and employment initiatives to assist both youth and adults. Includes readings drawn from a variety of sources.

Guthrie, G. P., and Guthrie, L. G. ***Streamlining Interagency Collaboration for Youth At Risk: Issues for Educators.*** **San Francisco, CA: Far West Laboratory for Educational Research and Development, September 1990.**

Presents a rationale and offers guidelines for interagency collaboration aimed at improving the delivery of educational and other services to at-risk youth and their families. Guidelines are based on a review of promising models operating in various parts of the U.S.

Hallman, H. W. *Neighborhoods: Their Place in Urban Life*. Beverly Hills, CA: SAGE Publications, 1984.

Provides alternative definitions of neighborhoods and neighborhood communities and discusses the various meanings and functions of neighborhoods—as physical settings, social communities, little economies, political communities, and others.

Hodgkinson, H. L. *Beyond the Schools: How Schools and Communities Must Collaborate to Solve the Problems Facing America's Youth*. Alexandria, VA: American Association of School Administrators; National School Boards Association, 1991.

Describes the social problems which have brought about a need for school-community collaboration in support of at-risk young people. Offers a series of ten strategies to improve outcomes for all students, especially those at risk of school failure.

Institute for Educational Leadership. *Metrolink: Developing Human Resources through Metropolitan Collaboration*. Washington, DC: Institute for Educational Leadership, March 1986. (ED 291 832)

Describes the activities of and findings from projects involving schools, communities, and businesses to enhance youth employment opportunities in five metropolitan areas: Atlanta, GA; Boston, MA; Hartford, CT; Indianapolis, IN; and Portland, OR in 1984-85. Findings about the nature of such collaborations are presented in the form of twelve "themes."

Kagan, S. L. ***Collaboration in Action: Reshaping Services for Young Children and Their Families.*** **New Haven, CT: Yale University, Bush Center for Child Development and Social Policy, September 1990. (ED 328 363)**

Presents the methods and results of a study of collaboration among child and family services providers, including identifying and describing effective early care and education collaborations. Seventy-two collaborations were studied.

Kahn, J., and Larson, G. "Meeting Needs with Scarce Resources: Community Network Building for Low-Incidence Conditions." In *Education and the Changing Rural Community: Anticipating the 21st Century*. Proceedings of the 1989 ACRES/NRSSC Symposium, March 1989. (ED 315 249)

Describes the community network model outlined in Pathfinder (1987) below. Concludes that the key ingredients for the development of a successful network include cooperative working relationships, a formal identification process, leadership development, realistic funding, and clear and open communication.

Kindred, L. W.; Bagin, D.; and Gallagher, D. R. *The School and Community Relations*. Englewood Cliffs, NJ: Prentice-Hall, Inc., 1976.

Discusses the need for the schools to be accountable to the public and for schools and communities to work together toward shared goals. Provides extensive discussions and guidelines for school staff to use in establishing and maintaining positive, productive community relations.

Kotler, M. "Partnerships in Community Service." *Journal of Community Action* 4/4 (1982): 45-50.

Discusses partnerships formed by local governments and neighborhood organizations to facilitate the delivery of various public services, particularly environmental services, public works, and facility management. Examples of different partnership arrangements are given.

Levitan, S. A.; Mangum, G. L.; and Pines, M. W. *A Proper Inheritance: Investing in the Self-sufficiency of Poor Families*. Washington, DC: Center for Policy Studies, The George Washington University, July 1989.

Proposes a comprehensive, family-centered approach to developing social programs to address the needs of the poor. Describes a structure for this "family investment initiative," which would allow poor families to seek assistance at family investment centers in their communities.

Levy, M. R. *Assessing Your Community on Overlay Maps*. Eugene, OR: Northwest Community Education Development Center, University of Oregon, 1975.

Discusses the use of overlay maps to increase one's knowledge of a given community through the development of overlay maps of its boundaries, people, land use, organizations, agencies, and other features.

Lindberg, M. "Partnership for Community Problem Solving: Failure and Promise." In *Public Policies for Distressed Communities*, edited by F. S. Redburn and T. R. Buss. Lexington, MA: Lexington Books, 1982, 259-267.

Discusses attempts made by various communities to address their problems through the formation of partnerships, effective and ineffective approaches, and guidelines for effective partnerships involving members of different social and economic sectors.

Mastny, A. Y.; Miller, D.; and Lazarus, A. *Linking Schools and Community Services: Resource Directory*. New Brunswick, NJ: Rutgers, The State University of New Jersey, Center for Community Education, School of Social Work, 1989.

A companion document to the Robinson and Mastny guidebook (see below), provides national and state-by-state listings and descriptions of resource organizations in a variety of areas, including adolescent pregnancy/parenting, child abuse and neglect, child advocacy, dropout prevention, drug and alcohol abuse, family life and sex education, and mental health/counseling.

McCurdy, J. "Los Angeles Project Helps Keep At-Risk Students in School: Cadre of Professionals Offer Academic and Emotional Support." *Education USA* 32/37 (1990): 283.

Reports on the evaluation of the Focus on Youth project, which has been found to have reduced dropouts, improved attendance, and raised achievement in 16 Los Angeles elementary, junior high, and senior high schools in low-income minority areas.

McMillan, D. W., and Chavis, D. M. "Sense of Community: A Definition and Theory." *Journal of Community Psychology* 14/1 (1986): 6-23.

Reviews sociological literature on the factors which comprise people's sense of community and proposes criteria for a definition and theory of sense of community. These include membership, influence, integration and fulfillment of needs, and shared emotional connection.

Murray, L., and Mess, M. *No Easy Answers: A Blueprint for Action in Working with Pregnant and Parenting Adolescents and Those at Risk*. Newark, NJ: Association for Children of New Jersey/New Brunswick, NJ: New Jersey Network on Adolescent Pregnancy, Rutgers University, 1986.

Presents the results of a study designed to collect information on the State of New Jersey's service provisions in the field of adolescent pregnancy—pregnancy prevention, pregnancy services, and teen parenting. Offers recommendations based on findings.

Naparstek, A. J.; Biegel, D. E.; Haskell, C.; and Sherman, W. "Achieving Human Scale: A Policy Framework for Building Partnerships." In *Neighborhood Networks for Humane Mental Health Care*, by A. J. Naparstek, D. E. Biegel, S. R. Spiro, J. Coffey, and John Andreozzi. New York: Plenum Press, 1982, 47-62.

Describes needs for collaborative partnerships between mental health service providers and the communities they serve, barriers to the development of such partnerships, and suggestions for use by those desiring to establish productive partnerships.

New Partnerships: Education's Stake in the Family Support Act of 1988. Washington, DC: William T. Grant Foundation Commission on Work, Family and Citizenship, 1989.

Describes the provisions of the Family Support Act of 1988, discusses the need for comprehensive services for disadvantaged families, and outlines ways that all levels of government can work with schools and human service agencies to develop collaborative programs.

Oakes, J. *Improving Inner-City Schools: Current Directions in Urban District Reform*. Santa Monica, CA: RAND Corporation, 1987. (ED 291 831)

Discusses approaches to improving schooling conditions and outcomes, particularly for urban schools serving disadvantaged populations. Approaches highlighted include application of effective schooling research, alternative programs, early childhood programs, social supports, and cooperative partnerships.

Pathfinder. *How To Develop A Community Network*. Minneapolis, MN: Pathfinder, 1987.

Offers guidelines for community network development based on learnings from demonstration projects in Minnesota and Wisconsin. While the Pathfinder model grew out of a need to coordinate services for children with chronic health problems and their families, the recommended steps are applicable to other kinds of network building as well.

Plant, R. "Community: Concept, Conception, and Ideology." *Politics and Society* 8/1 (1978): 79-107.

Discusses various political and historical views of community in an attempt to resolve the different meanings ascribed to this term.

Raywid, M. A. "Community and Schools: A Prolegomenon." *Teachers College Record* 90/2 (1988): 197-210.

Argues that modern society lacks the cohesive communities that were part of the experience of previous generations and promotes the idea of deliberately working to create a sense of community in the public schools.

Reed, S., and Sautter, R. C. "Children of Poverty: The Status of 12 Million Young Americans." *Phi Delta Kappan* 71/10 (1990): 1-12.

Analyzes the economic circumstances of children in the U.S. and concludes that, "more than 25 years after America first declared war on poverty, the nation's children are worse off than ever." Proposes increased government funding and school-community collaboration to address the problems associated with widespread poverty.

Robinson, E. R. *Guide to Networking*. New Brunswick, NJ: Rutgers, The State University of New Jersey, School of Social Work, Center for Community Education, 1985.

Provides information about networking by presenting answers to commonly asked questions and through identifying the steps involved in establishing a network. Sample letters and forms are included.

Robinson, E. R., and Mastny, A . Y. *Linking Schools and Community Services: A Practical Guide*. New Brunswick, NJ: Rutgers, The State University of New Jersey, School of Social Work, Center for Community Education, 1989.

Offers a model process for effective school-community collaboration, including roles and responsibilities of various actors, suggested steps to follow, evaluation guidelines, and sample letters and forms.

Schindler-Rainman, E., and Lippitt, R. *Team Training for Community Change: Con-*

cepts, Goals, Strategies and Skills. Riverside, CA: University of California, 1972.

Documents the development and implementation of a college extension training program designed to build participant skills in group processes to bring about community change.

"San Diego schools help pupils by helping families." *Oregonian*, May 13, 1991, pp. A1, A6.

Describes New Beginnings, a San Diego program that provides on-campus access to food stamps, eyeglasses, physical examinations, job training, and other services to disadvantaged students and their parents.

Shedlin, A., Jr. "Shelter from the Storm." *The American School Board Journal* 177/8 (1990): 12-16.

Argues that the public schools were "designed for a society that no longer exists," and that they need to take on the role as the center of social services for children. Describes several approaches schools across the country are taking to provide or coordinate needed services.

Southwest Educational Development Laboratory. "School-Linked Services—So that Schools Can Educate and Children Can Learn—Part 1." *INSIGHTS on Educational Policy and Practice* 20 (May 1990).

Describes the nature of the need for schools to integrate social and health service providers and increase access to these services for disadvantaged students and families who are in need. Identifies attributes of programs which successfully link education, health, and human services.

Southwest Educational Development Laboratory. "School-Linked Services—So that Schools Can Educate and Children Can Learn—Part 2." *INSIGHTS on Educational Policy and Practice* 20 (August 1990).

Identifies additional characteristics of successful programs bringing together educational, health, and social services and explores policy changes needed to make efficient service delivery possible.

Southwest Educational Development Laboratory. "School-Linked Services—So that Schools Can Educate and Children Can Learn—Part 3." *INSIGHTS on Educational Policy and Practice* 20 (September 1990).

Identifies the efforts of policymakers, educators, and human service professionals in the Southwest region who are working to bring about the kinds of coordinated service delivery systems that can effectively meet the needs of at-risk students and their families.

Spring, W. J. "A Public/Private Careers Service: Building Network of Opportunity for the Majority of Our Young People." *School Success for Students at Risk: Analysis and Recommendations of the Council of Chief State School Officers.* San Diego, CA: Harcourt Brace Jovanovich, 1988, 248-273.

Draws upon European apprenticeship practices and model American projects such as the Boston Compact to argue that the U.S. needs a "new institution," which would engage the business community "as organized participants in the community's effort to instruct and to provide an economic future for its young people," particularly at-risk minority youth.

Sylvester, K. "New Strategies to Save Children in Trouble." *Governing* 3/8 (1990): 32-37.

Discusses the trend toward school-social service agency collaboration to address an array of needs experienced by students and their families. Gives examples of successful pilot programs, and identifies common elements across these programs.

Warren, D. I. *Helping Networks: How People Cope with Problems in the Urban Community.* Notre Dame, IN: University of Notre Dame Press, 1981.

Presents results of a study of the ways in which different populations in a community deal with their problems (1) independently of professional service agencies and (2) through utilizing such agencies.

Weiss, J. A. "Pathways to Cooperation Among Public Agencies." *Journal of Policy Analysis and Management* 7/1 (1987): 94-117.

Examines the kinds and degrees of cross-agency cooperation engaged in by nine groups of local school districts. Discusses barriers to cooperation and forces that cause agencies to overcome those barriers. Offers a process model which can help agency personnel to design more workable cooperative relationships.

Weiss, M. *Partners: Reaching Out.* Paper presented at the Annual Conference of the Montana Adult Education Association and Montana Association of Community Education, Lewiston, MT, October 1984. (ED 258 670)

Discusses the importance of, barriers to, and essential elements in cooperative partnerships involving, public schools, community colleges, community education programs, businesses, and other organizations. Provides examples of partnerships with which the author has been involved.

Wellman, B. "The Community Question Re-Evaluated." In *Power, Community and the City, Volume I*, edited by B. Wellman. New Brunswick: Transition Books, 1988, 81-107.

Discusses past and present concepts of "community." Concludes that personal communities or networks, which are defined socially rather than spatially, are the significant communities in modern urban settings and that these personal communities connect their members to larger social structures.

Wilkins, R. "The Black Poor Are Different." *New York Times*, August 22, 1989, p. 23.

Argues that the legacy of racism and the breakdown of the family in black urban culture have created a particular set of problems which can best be addressed by making needed social services available through the public schools.

Williams, M. R. *Neighborhood Organizing for Urban School Reform*. New York: Teachers College Press, 1989.

Examines the history of, need for, and barriers to neighborhood organizing to bring about school improvement, particularly in poor, inner-city settings. Includes case studies and suggestions based on findings.

Winecoff, L., and Powell, C. *Focus: Seven Steps to Community Involvement In Educational Problem Solving*. Midland, MI: Pendell Publishing Co., 1975.

Describes a model to be used by diverse groups within a community to work together to address their shared concerns and problems. Includes a focus on establishing and pursuing measurable outcomes and evaluating project effectiveness.

Woodson, R. L. "The Importance of Neighborhood Organizations in Meeting Human Needs." Chapter 1 in J. A. Meyer, ed., *Meeting Human Needs: Toward a New Public Philosophy*. Washington, DC: American Enterprise Institute for Public Policy Research, 1982, 132-149.

Focuses on the key role of neighborhood groups in serving the needs of community members, including a discussion of the drawbacks associated with the attempts of social service agencies to address problems, barriers faced when neighborhood groups pursue self-help activities, and the stages in the development of these groups.

This publication is based on work sponsored wholly, or in part, by the Office of Educational Research and Improvement (OERI), U.S. Department of Education, under Contract Number RP91002001. The content of this publication does not necessarily reflect the views of OERI, the Department, or any other agency of the U.S. Government.

SCHOOL IMPROVEMENT RESEARCH SERIES
"Research You Can Use"

Close-Up #11

Teaching Thinking Skills

Kathleen Cotton

> Perhaps most importantly in today's information age, thinking skills are viewed as crucial for educated persons to cope with a rapidly changing world. Many educators believe that specific knowledge will not be as important to tomorrow's workers and citizens as the ability to learn and make sense of new information.
>
> —D. Gough, 1991

Introduction

Throughout history, philosophers, politicians, educators and many others have been concerned with the art and science of astute thinking. Some identify the spirit of inquiry and dialogue that characterized the golden age of ancient Greece as the beginning of this interest. Others point to the Age of Enlightenment, with its emphasis on rationality and progress (Presseisen 1986, p. 6).

In the twentieth century, the ability to engage in careful, reflective thought has been viewed in various ways: as a fundamental characteristic of an educated person, as a requirement for responsible citizenship in a democratic society, and, more recently, as an employability skill for an increasingly wide range of jobs. Deborah Gough's words quoted at the beginning of this report typify the current viewpoint in education about the importance of teaching today's students to think critically and creatively. Virtually all writers on this subject discuss thinking skills in connection with the two related phenomena of modern technology and fast-paced change. Robinson, for example, states in her 1987 practicum report:

> Teaching children to become effective thinkers is increasingly recognized as an immediate goal of education....If students are to function successfully in a highly technical society, then they must be equipped with lifelong learning and thinking skills necessary to acquire and process information in an ever-changing world (p. 16).

Beyth-Marom, et al. (1987) underscore this point, characterizing thinking skills as means to making good choices:

> Thinking skills are necessary tools in a society characterized by rapid change, many alternatives of actions, and numerous individual and collective choices and decisions (p. 216).

Northwest Regional Educational Laboratory
101 S.W. Main Street, Suite 500
Portland, Oregon 97204
Telephone (503) 275-9500

School Improvement Program

The societal factors that create a need for well-developed thinking skills are only part of the story, however. Another reason that educators, employers, and others call for more and better thinking skills instruction in schools is that American young people, in general, do not exhibit an impressive level of skill in critical or creative thinking. The following observation from Norris's 1985 review is typical:

> Critical thinking ability is not widespread. Most students do not score well on tests that measure ability to recognize assumptions, evaluate arguments, and appraise inferences (p. 44).

Likewise, Robinson notes that:

> While the importance of cognitive development has become widespread, students' performance on measures of higher-order thinking ability has displayed a critical need for students to develop the skills and attitudes of effective thinking (p. 13).

There is yet another major force behind the call for improved thinking skills instruction. Educators are now generally agreed that it is in fact possible to increase students' creative and critical thinking capacities through instruction and practice. Ristow (1988) notes that, in the past, these capacities have often been regarded as:

> a fluke of nature, a genetic predisposition....qualities [that] are either possessed or not possessed by their owner and that education can do very little to develop these qualities (p. 44).

Ristow then goes on to say:

> However, a great deal of the research currently being reported indicates that the direct teaching of creative skills can produce better, more creative thinkers.

Presseisen makes this point even more forcefully, asserting that:

> The most basic premise in the current thinking skills movement is the notion that students *can* learn to think better if schools concentrate on teaching them *how* to do so (p. 17).

Definitions

Thinking skills. Critical thinking. Creative thinking. Higher-order thinking. Those who take an interest in this field of study soon realize that they cannot go tossing off these terms in a casual manner, since there are no universal agreements as to their precise meanings.

Critical thinking, for example, has been variously defined as:

- Reflective and reasonable thinking that is focused on deciding what to believe or do (Robert Ennis, quoted in Presseisen, p. 24)
- The disposition to provide evidence in support of one's conclusions and to request evidence from others before accepting their conclusions (Hudgins and Edelman 1986, p. 333)
- The process of determining the authenticity, accuracy and worth of information or knowledge claims (Beyer 1985, p. 276).

Beyer goes on to say that "critical thinking has two important dimensions. It is both a frame of mind and a number of specific mental operations" (p. 271). Norris (1985) agrees, stating that:

> Having a critical spirit is as important as thinking critically. The critical spirit requires one to think critically about all aspects of life, to think critically about one's own thinking, and to act on the basis of what one has considered when using critical thinking skills (p. 44).

Lists of alternative definitions could also be generated for other terminology commonly used in the thinking skills literature. In an attempt to come to terms with these definitional differences, Alvino, in his 1990 "Glossary of Thinking-Skills Terms," offers a set of definitions which are widely—though not universally—accepted by theorists and program developers. For purposes of the present report, these definitions are applicable. They include:

- **Bloom's Taxonomy**. Popular instructional model developed by the prominent educator Benjamin Bloom. It categorizes thinking skills from the concrete to the abstract—knowledge, comprehension, application, analysis, synthesis, evaluation. The last three are considered **higher-order** skills.

- **Cognition**. The mental operations involved in thinking; the biological/neurological processes of the brain that facilitate thought.

- **Creative thinking**. A novel way of seeing or doing things that is characterized by four components—*fluency* (generating many ideas), *flexibility* (shifting perspective easily), *originality* (conceiving of something new), and *elaboration* (building on other ideas).

- **Critical thinking**. The process of determining the authenticity, accuracy, or value of something; characterized by the ability to seek reasons and alternatives, perceive the total situation, and change one's view based on evidence. Also called "logical" thinking and "analytical" thinking.

- **Infusion**. Integrating thinking skills instruction into the regular curriculum; infused programs are commonly contrasted to **separate** programs, which teach thinking skills as a curriculum in itself.

- **Metacognition**. The process of planning, assessing, and monitoring one's own thinking; the pinnacle of mental functioning.

- **Thinking skills**. The set of basic and advanced skills and subskills that govern a person's mental processes. These skills consist of knowledge, dispositions, and cognitive and metacognitive operations.

- **Transfer**. The ability to apply thinking skills taught separately to any subject (p. 50).

The Thinking Skills Research

This summary is based on a review of 56 documents. Thirty-three of these are reports of research studies or reviews and are cited, with annotations, in the Key References section of the bibliography. Twenty-three are descriptive, theoretical, or guidelines documents or are concerned with research in areas other than the effectiveness of programs and practices. These reports are itemized in the General References.

Of the 33 key documents, 22 are research studies or evaluations, and 11 are reviews or syntheses of research. Subjects of these investigations include: general (or unspecified) student populations - 12 reports, elementary students - 9, secondary students - 9, and both secondary and postsecondary students - 3. The research involved regular, gifted, EMR, and Chapter 1 student populations; a representative range of racial/ethnic groups; and a balance of urban, suburban, and rural settings. Only three of the reports deal with student populations outside the United States. Five of the reports have teachers as well as students as their subjects.

The effects of many individual practices and whole programs were investigated. Many reports looked at the effects of instruction in various clusters of higher-order thinking skills, including analysis, synthesis, and evaluation, together with the related skills and subskills of making predictions, making inferences, self-questioning and other metacognitive functions, formulating hypotheses, drawing conclusions, elaborating, solving problems, making decisions, identifying assumptions, determining bias, recognizing logical inconsistencies, and others.

Other reports looked at specific instructional practices, such as tutoring, using thinking skills software programs, and using advance organizers. Five were concerned with the effects of training teachers to conduct thinking skills instruction. The full thinking skills programs investigated by the research are discussed in the section on findings.

Outcome areas were likewise numerous, including student achievement as measured by assessments in the areas of reading comprehension, mathematics, general science, biology, physics, chemistry, art, social studies, and geography. Other outcome areas studied include SAT scores, commercial and locally developed higher-order thinking skills test scores, IQ test scores, and behavioral outcomes such as engaged time/level of participation. Research studies addressing effects on student attitudes or self-concepts were insufficient to allow for any general conclusions.

Research Findings

EFFECTS ON STUDENT OUTCOMES

Thinking skills instruction enhances academic achievement. A broad, general finding from the research base is that nearly all of the thinking skills programs and practices investigated were found to make a positive difference in the achievement levels of participating students. Studies which looked at achievement over time found that thinking skills instruction accelerated the learning gains of participants, and those with true or quasi-experimental designs generally found that experimental students outperformed controls to a significant degree. Reports with such findings include: Barba and Merchant 1990; Bass and Perkins 1984; Bransford, et al. 1986; Crump, Schlichter, and Palk 1988; Freseman 1990; Haller, Child, and Walberg 1988; Hansler 1985, Horton and Ryba 1986; Hudgins and Edelman 1986; Kagan 1988; Marshall 1987; Matthews 1989; MCREL 1985; Nickerson 1984; Pearson 1982; Pogrow 1988; Ristow 1988; Riding and Powell 1985, 1987; Robinson 1987; Sadowski 1984-85; Snapp and Glover 1990; Sternberg and Bhana 1986; Tenenbaum 1986; Whimbey 1985; Wong 1985; and Worsham and Austin 1983.

Research supports instruction in many specific skills and techniques. Gains on learning and intelligence measures were noted in response to providing instruction in a variety of specific techniques, including:

- *Study skills*, such as paraphrasing, outlining, developing cognitive maps and using advance organizers (Barba and Merchant 1990; Snapp and Glover 1990; Tierney, et al. 1989).
- *Creative and critical thinking skills*, such as decision making, problem solving, fluency, observation, exploration, classification, generating hypotheses (Crump, Schlichter, and Palk 1988; Herrnstein, et al. 1986; Horton and Ryba 1986; Kagan 1988; Matthews 1989; MCREL 1985; Ristow 1988; Robinson 1987; Tenenbaum 1986).
- *Metacognition*, including awareness, self-monitoring, and self-regulating (Bransford, et al. 1986; Freseman 1990; Haller, Child, and Walberg 1988; Pearson 1982; Pogrow 1988; Robinson 1987; Wong 1985).
- *Inquiry training*, in which students are given a "discrepant event" and practice information-gathering skills to resolve the discrepancy (Baum 1990; Hansler 1985; Pogrow 1988).

Various instructional approaches enhance thinking skills. In addition to instruction in specific mental operations, research also supports the use of several teaching practices as effective in fostering the development of thinking skills, including:

- *Redirection / probing / reinforcement.* Known to increase students' content knowledge, these techniques also enhance the development of critical and creative thinking skills (Cotton 1988; Pearson 1982; Robinson 1987; Tenenbaum 1986).
- *Asking higher-order questions* (Baum 1990; Cotton 1988; Herrnstein, et al. 1986; Matthews 1989; Robinson 1987; Sternberg and Bhana 1986).
- *Lengthening wait-time*, i.e., the amount of time the teacher is willing to wait for a student to respond after posing a question (Cotton 1988; Hudgins and Edelman 1986; Pogrow 1988).

These practices are also associated with increases in student engaged time/level of participation (Cotton 1988; MCREL 1985; Freseman 1990).

Computer-assisted instruction helps to develop thinking skills. Although the approach taken differed across the various kinds of instructional software studied, all of the CAI programs designed to improve students' thinking skills were effective. The programs focused on skill building in areas such as verbal analogies, logical reasoning, and inductive/deductive thinking. Supportive research includes Bass and Perkins (1984); Horton and Ryba (1986); Riding and Powell (1985, 1987); and Sadowski (1984-85). The computer-oriented HOTS Program originally developed for Chapter 1 elementary students also shows positive results; however, developer Stanley Pogrow (1988) notes that the heart of the program is the teacher-student interaction called for by HOTS activities.

Research supports the use of several specific thinking skills programs. The research consulted in preparation for this report is not all-inclusive, and no doubt there are studies and evaluations supporting the effectiveness of programs other than those identified here. The following programs are cited here because they are widely known and used, are representative of the kinds of thinking skills programs in current use in schools, and have been studied by researchers. Programs found to be effective include:

- *Comprehensive School Mathematics Program (CSMP).* This is an elementary-level math curriculum that focuses on classification, elementary logic, and number theory. Children use computers, calculators and geometry models to pose problems, explore concepts, develop skills, and define new ideas (Baum 1990).

- *CoRT (Cognitive Research Trust).* Intended for use by students of any age/grade level, the program develops critical, creative, and constructive thinking skills over a three-year period (Baum 1990).

- *HOTS (Higher-Order Thinking Skills).* HOTS is a computer laboratory program for Chapter 1 and other elementary students. It uses readily available computer software in concert with specific teaching practices to enhance skills in metacognition, inferencing, and decontextualization, i.e., taking something learned in one setting and applying it to another (Pogrow 1988; Baum 1990).

- *Institute for Creative Education (ICE).* ICE is a creative problem-solving process for students in grades K-12. It develops students' ability to apply the creative thinking qualities of fluency, flexibility, originality, and elaboration to problem-solving activities (Baum 1990).

- *Instrumental Enrichment (IE).* Upper elementary and secondary students engage in clusters of problem-solving tasks and exercises that are designed to make students "active learners" and enhance their general learning ability (Baum 1990; Sternberg and Bhana 1986).

- *Kids Interest Discovery Study (KIDS) Kits.* Elementary schools conduct surveys of students' interests and, based on results, students engage in active, self-directed learning and higher-level thinking around selected topics (Baum 1990).

- *Odyssey.* For use by upper elementary or secondary students, this program focuses on six aspects of cognitive functioning—the foundations of reasoning, understanding language, verbal reasoning, problem solving, decision making, and investive thinking (Sternberg and Bhana 1986).

- *Philosophy for Children.* Designed to develop thinking and reasoning skills through classroom discussion of philosophical topics, the program is organized around six novels in which children apply philosophical thinking to their daily lives. The curriculum spans the entire K-12 range (Baum 1990; Sternberg and Bhana 1986).

- *Problem Solving and Comprehension.* This program concentrates on four problem-solving components—decoding skills, vocabulary, basic arithmetic operations, and precise thinking. Students work in problem solver-listener pairs. The program is frequently used in conjunction with other thinking skills programs (Sternberg and Bhana 1986).

- *Sage.* Sage is designed for gifted elementary students and extends the regular curriculum through incorporating thinking skills development activities, mini-study units, and independent study (Baum 1990).

- *SOI.* Based on Guilford's structure-of-intellect theory, the program is organized around the development of 120 intellectual skills from foundation level to higher order and emphasizes reasoning as the key component of successful learning (Baum 1990; Sternberg and Bhana 1986).

- *Talents Unlimited (TU).* TU is designed for elementary students and helps participants develop multiple thinking skills (called "talents" in the program). Teachers receive training to instruct their students in productive thinking, decision making, planning, forecasting, communication, and knowledge base development (Crump, Schlichter, and Palk 1988; Baum 1990).

- *Think.* Secondary students engage in problem-solving activities in which they are encouraged to discuss the rationales leading to their conclusions, consider other points of view, and analyze various reasoning processes (Worsham and Austin 1983).

Training teachers to teach thinking skills leads to student achievement gains. Developers and researchers of most of the effective programs cited above claim that teacher training is a key factor in the programs' success. The majority of these programs have a strong teacher training component, and developers consider this training to be as important as the program content in bringing about the learning gains noted. In addition to the key role of staff development in the programs cited by reviewers Sternberg and Bhana (1986) and Baum (1990), a positive relationship between teacher training and student achievement was also identified in studies conducted by Crump, Schlichter, and Palk (1988); Hudgins and Edelman (1986); MCREL (1985); and Robinson (1987).

Programs, strategies, and training are important, BUT... In drawing conclusions about the effectiveness of particular thinking skills instructional strategies, whole programs, or staff development approaches, several researchers also offer a caveat to those who might make curriculum decisions based on this information. Essentially, they say, yes, these programs, practices and training activities *can be* effective, but their effectiveness is partially dependent on factors other than the methodologies themselves. In a typical expression of reservation, Sternberg and Bhana, at the conclusion of their 1986 review of several thinking skills programs, write:

> ...the success of a given program depends on a large number of implementation-specific factors, such as quality of teaching, administrative support, appropriateness of the program for the student population, and the extent to which the program is implemented in the intended manner" (p. 67).

Sternberg and Bhana's observation about the match between program and student population also serves to remind us of another truism: just as there is no one certifiably "best" approach to teaching many other things, there is no one best way to teaching thinking skills. At the end of a study comparing different approaches to teaching critical thinking, Bass and Perkins write, "Like so much educational research, our final results were not supportive of just one instructional technique" (p. 96).

THE CONTROVERSIES IN THINKING SKILLS INSTRUCTION

Is it better to teach thinking skills to students via infused programs or separate curricula? Is it better to teach these skills directly or to create situations whereby students learn them inferentially through being placed in circumstances which call for them to apply these skills? How much classroom time is required in order for thinking skills instruction to be effective, i.e., for students to master higher-order skills and be able to transfer them to other learning contexts? Is successful thinking skills instruction partly a matter of establishing a certain classroom climate, one that is open and conducive to "thinking for oneself"?

Differences of opinion—sometimes profound ones—have been expressed by theorists, developers, and classroom teachers in response to these questions. What does the research say?

Infused versus separate programs. Of the demonstrably effective programs itemized above, about half are of the infused variety, and the other half are taught separately from the regular curriculum. In addition, while several documents in the thinking skills literature (e.g., Bransford, et al. 1984; Baum 1990; and Gough 1991) offer support for infusion of thinking skills activities into subjects in the regular curriculum, others (Freseman 1990; Matthews 1989; Pogrow

1988; and Baum 1990) provide support for separate thinking skills instruction. The strong support that exists for both approaches (in the research, not to mention in the views of warring experts) indicates that either approach can be effective. Freseman represents what is perhaps a means of reconciling these differences when he writes, at the conclusion of his 1990 study:

> ...thinking skills need to be taught directly before they are applied to the content areas....[I] considered the concept of teaching thinking skills directly to be of value especially when there followed immediate application to the content area...(p. 48).

In a similar vein, Bransford (1986) says:

> "Blind" instruction [in which students are not helped to focus on general processes or strategies nor to understand how new concepts and strategies can function as tools for problem solving] does not usually lead to transfer to new tasks....as the instruction focuses on helping students become problem solvers who learn to recognize and monitor their approaches to particular tasks, transfer is more likely to occur (p. 69-70).

Direct versus inferential learning. Approaches such as inquiry development and the techniques used in the HOTS program involve guiding students through the process of figuring out what strategies to apply and where those strategies can lead them. Some researchers and developers (e.g., Hansler 1985; Orr and Klein 1991; Pogrow 1988) offer evidence that this approach enables students to learn thinking skills, rather than merely learning *about* them. HOTS Program developer Stanley Pogrow calls the process "controlled floundering"—"floundering" because students must feel their way (along a line of reasoning, for example), but "controlled" because teachers stay with them and assist them to work through the steps of their tasks.

Others favor direct instruction in the steps of whatever thinking process the teacher wants the students to learn. Teachers using this approach typically demonstrate the process using events and ideas which are familiar to the students and then applying the same generic process to unfamiliar material, usually new content from the school curriculum. Proponents claim that many students, particularly those whose out-of-school lives have offered little exposure to higher-order thinking, cannot be expected to develop these skills inferentially and must be taught them directly. The efficacy of direct instruction in a variety of thinking skills is demonstrated in the work of Freseman (1990); Herrnstein, et al. (1986); Pearson (1982); and Wong (1985), among others.

Again, it would appear that either approach can be effective, and a blend of the two may well be most effective. Pearson, for example, favors both direct instruction and guided practice:

> ...I think the justification exists for placing more emphasis on direct explicit teaching, interactive discussions, substantive feedback, and control and self-monitoring strategies (p. 26).

Time requirements for thinking skills instruction. This topic is not so much the subject of controversy as of uncertainty; even the experts seem uncertain as to how much time should be devoted to thinking skills activities in order for students to learn those skills well. Of course, time requirements will be different for different students, and experience shows that some students become adept thinkers with no explicit instruction at all.

The research can only address the time question obliquely, since most researchers don't design studies in which different groups of students are exposed to different amounts of instruction. What the research does show is that those commercial or locally developed programs which have made substantial differences in students' academic performance are quite time-intensive. Instrumental Enrichment requires three to five hours of instruction per week over approximately two years. Philosophy for Children, a K-12 curriculum, calls for three 40-minute periods weekly. Odyssey is made up of 100 45-minute lessons. Programs such as HOTS, which are designed especially for at-risk students who have limited experience in understanding and applying higher-order strategies, require even more time. Pogrow (1987) says:

> It takes an extensive amount of time to produce results—at least 35 minutes a day, four days a week, for several months, for true thinking skills development to occur (p. 12).

Given these kinds of time demands, conducting meaningful thinking skills instruction clearly requires a high level of staff commitment and administrative support.

Classroom climate. Research shows that positive classroom climates characterized by high expectations, teacher warmth and encouragement, pleasant physical surroundings, and so on, enhance all kinds of learning. In the thinking skills literature, there is an especially strong emphasis on the importance of climate. Orr and Klein (1991) go so far as to say that:

> Teachers and administrators should systematically evaluate the general culture of their classrooms and schools and should estimate how this culture affects their ability to promote critical reasoning habits among students (p. 131).

The point made by these writers and many others is that moving beyond one's mental habits and experimenting with new ways of looking at things—the very stuff of thinking skills instruction—involve risk. In order for students to be willing to participate in such activities, they:

> ...need to feel free to explore and express opinions, to examine alternative positions on controversial topics, and to justify beliefs about what is true and good, while participating in an orderly classroom discourse (Jerry Thacker, as quoted in Gough 1991, p. 5).

Here again, research can provide illumination only indirectly; however, it is the case that the validated programs in the research base include both teacher training components and classroom activities which emphasize establishing open, stimulating, supportive climates.

How might this be accomplished? Thacker lists twelve recommended teacher behaviors, all of which will be familiar to good teachers, for fostering a climate conducive to the development of thinking skills:

- Setting ground rules well in advance
- Providing well-planned activities
- Showing respect for each student
- Providing nonthreatening activities
- Being flexible
- Accepting individual differences
- Exhibiting a positive attitude
- Modeling thinking skills
- Acknowledging every response
- Allowing students to be active participants
- Creating experiences that will ensure success at least part of the time for each student
- Using a wide variety of teaching modalities (p. 5).

Summary

Findings emerging from the thinking skills research reviewed in preparation for this report include:

- Providing students instruction in thinking skills is important for several reasons:
  - These skills are necessary for people to have in our rapidly changing, technologically oriented world.
  - Students, in general, do not have well-developed thinking skills.
  - Although many people once believed that we are born either with or without creative and critical thinking abilities, research has shown that these skills are teachable and learnable.

- Instruction in thinking skills promotes intellectual growth and fosters academic achievement gains.

- Research supports providing instruction in a variety of specific creative and critical thinking skills, study techniques, and metacognitive skills.

- Instructional approaches found to promote thinking skill development include redirection, probing, and reinforcement; asking higher-order questions during classroom discussions, and lengthening wait-time during classroom questioning.

- Computer-assisted instruction is positively related to intellectual growth and achievement gains.

- Many commercially available thinking skills instructional programs have been shown to bring about improvements in students' performance on intelligence and achievement tests.

- Training teachers to teach thinking skills is associated with student achievement gains.

- In addition to program content, classroom practices, and teacher training, the success of thinking skills instruction is also dependent upon other factors, such as administrative support and appropriate match between the students and the instructional approach selected.

- Neither infused thinking skills instruction nor separate curricula is inherently superior to the other; both can lead to improved student performance, and elements of both are often used together, with beneficial results.

- Student performance has been shown to improve as a result of both direct teaching and inferential learning of thinking skills. Again, some programs have successfully combined these approaches.

- Because thinking skills instruction requires large amounts of time in order to be effective, administrative support and schoolwide commitment are necessary for program success.

- It is especially important to establish and maintain a positive, stimulating, encouraging classroom climate for thinking skills instruction, so that students will feel free to experiment with new ideas and approaches.

In both school settings and in the world outside of school, it is crucial for people to have "skills in questioning, analyzing, comparing, contrasting, and evaluating so that [they] will not become addicted to being told what to think and do" (Freseman 1990, p. 26). Putting into practice the findings from the thinking skills research can help schools to teach these skills and students to gain and use them.

Key References

Barba, R. H., and Merchant, L. J. "The Effects of Embedding Generative Cognitive Strategies in Science Software." *Journal of Computers in Mathematics and Science Teaching* 10/1 (1990): 59-65.

Examines the effects of science software which incorporates generative cognitive strategies such as recall, integration, organization, elaboration, and visualization. Experimental students outperformed controls on tests of both higher-order cognitive skills and science content knowledge.

Bass, G. M., Jr., and Perkins, H. W. "Teaching Critical Thinking Skills with CAI." *Electronic Learning* 14/2 (1984): 32, 34, 96.

Investigates the relative effects of CAI and conventional instruction in enhancing the critical thinking skills of seventh grade students. Of the four kinds of skills taught and tested, students performed better after CAI instruction in two and better after conventional instruction in the other two.

Baum, R. "Finishing Touches—10 Top Programs." *Learning* 18/6 (1990): 51-55.

Identifies ten thinking skills programs that have proven effective in increasing students' cognitive performance. Programs are organized by whether they involve infusing thinking skills into the established curriculum or provide a separate thinking skills course. All programs include teacher training.

Bransford, J. D.; Burns, M. S.; Delclos, V. R.; and Vye, N. J. "Teaching Thinking: Evaluating Evaluations and Broadening the Data Base." *Educational Leadership* 44/2 (1986): 68-70.

As a follow-up to Sternberg and Bhana's article in the same issue (see below), these authors cite data indicating that approaches which involve teaching from a metacognitive or problem-solving perspective enhance skill transfer in reading com-

prehension, mathematics, and writing, thus producing gains in student achievement.

Cotton, K. *Classroom Questioning: Close-Up No. 5.* Portland, OR: Northwest Regional Educational Laboratory, May 1888.

Synthesizes findings from 37 research reports on the relationship between teacher's classroom questioning behavior and a variety of student outcomes. Found that, when teachers ask higher cognitive questions, conduct redirection/probing/reinforcement, and/or increase wait time, the cognitive sophistication of student responses increases.

Crump, W. D.; Schlichter, C. L.; and Palk, B. E. "Teaching HOTS in the Middle and High School: A District-Level Initiative in Developing Higher Order Thinking Skills." *Roeper Review* 10/4 (1988): 205-211.

Presents results of an evaluation of the effectiveness of training nearly all teachers and administrators in an Alabama school district in the Talents Unlimited model for teaching higher-order thinking skills. Teacher self-reports were positive, and the performance gains of middle and high school students on thinking skills assessments indicated that the program was successful.

Eriksson, G. I. "Choice and Perception of Control: The Effect of a Thinking Skills Program on the Locus of Control, Self-Concept and Creativity of Gifted Students." *Gifted Education International* 6 (1990): 135-142.

Compares the effects of two thinking skills programs on the affective variables of locus of control and self-concept, and on the creativity measures of originality, fluency, and flexibility. Thinking skills instruction had a significant, beneficial effect on locus of control and creativity, but no significant effect on self-concept.

Farha, J. L., and Milbrandt, M. S. *"Beyond Lollipop Trees": Teaching Thinking Skills through Art.* Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA, March-April 1989. (ED 307 968)

Seeks to determine the effect of an innovative art education program on the art content learning and general achievement of fourth, fifth, and sixth graders. Experimental students outperformed controls on learning of art content; effects on achievement were inconclusive.

Freseman, R. D. *Improving Higher Order Thinking of Middle School Geography Students By Teaching Skills Directly.* Fort Lauderdale, FL: Nova University, 1990. (ED 320 842)

Examines the outcomes produced by a geography curriculum which included direct instruction in visualizing, prioritizing, summarizing, making inferences through drawing analogies, and problem solving using divergent thinking. Effects on the achievement and self-concepts of participating seventh graders were generally positive, though below predicted levels in some areas.

Haller, E. P.; Child, D. A.; and Walberg, H. J. "Can Comprehension Be Taught? A Quantitative Synthesis of 'Metacognitive' Studies." *Educational Researcher* 17/9 (1988): 5-8.

Synthesizes findings from 20 studies on the effects of teaching students the metacognitive skills of awareness, monitoring, and regulating of their own understanding of material read. Findings indicate a substantial effect of such instruction on students' reading comprehension.

Hansler, D. D. *Studies on the Effectiveness of the Cognition Enhancement Technique for Teaching Thinking Skills*, 1985. (ED 266 432)

Describes research studies demonstrating the effectiveness of cognition enhancement activities (also called inquiry training) in developing elementary and secondary students' skills in constructing and testing hypotheses.

Herrnstein, R. J.; Nickerson, R. S.; de Sanchez, M.; and Swets, J. A. "Teaching Thinking Skills." *American Psychologist* 41/11 (1986): 1279-1289.

Investigates the effects of a year-long thinking skills course on the general mental abilities and specific cognitive skills of Venezuelan seventh graders. Experimental students significantly outperformed controls on both general and special measures.

Horton, J., and Ryba, K. "Assessing Learning with Logo: A Pilot Study." *The Computing Teacher* 14/1 (1986): 24-28.

Compares the performance on cognitive tasks by New Zealand junior high school students who had used the Assessing Learning with Logo program with the skills of those who had received no thinking skills instruction. Logo-using students outperformed controls in five of six areas.

Hudgins, B., and Edelman, S. "Teaching Critical Thinking Skills to Fourth and Fifth Graders Through Teacher-Led Small-Group Discussions." *Journal of Educational Research* 79/6 (1986): 333-342.

Investigates the effects on both teacher and student behavior of a teacher training program in teaching critical thinking skills to small groups. Students exhibited increased critical thinking behavior in some areas after their teachers received training.

Kagan, D. M. "Evaluating a Language Arts Program Designed to Teach Higher Level Thinking Skills." *Reading Improvement* 25/1 (1988): 29-33.

Reports on the effects of a language arts program with a strong focus on developing high-order thinking skills in sixth graders. Lessons were developed using portions of two commercial instructional packages. Participating students made significant gains, as measured by four different divergent thinking skills instruments.

Marshall, J. D. "The Effects of Writing on Students' Understanding of Literary Texts." *Research in the Teaching of English* 21/1 (1987): 30-63.

Examines the effects of three kinds of writing assignments on the later comprehension and analysis of literary texts, as measured by a test calling for a written interpretation of a literary work. Students whose earlier assignments had called for more lengthy and in-depth writing exhibited most sophisticated reasoning and higher quality written products than those who had previously done only brief, restricted writing or no writing at all.

Matthews, D. B. "The Effect of a Thinking-Skills Program on the Cognitive Abilities of Middle School Students." *Clearing House* 62/5 (1989): 202-204.

Reports findings of a study of the effects produced by a nondomain-specific thinking skills program upon the Cognitive Abilities Test scores of eighth and ninth graders. Post-test students outperformed pre-test students on all subtests except one.

Mid-Continent Regional Educational Laboratory. *Report of Thinking Skill Instructional Activities*. Denver, CO: Mid-Continent Regional Educational Laboratory, Inc., August 30, 1985. (ED 273 970)

Examines the effects of training teachers in how to foster in their students 18 higher-order thinking subskills in the three areas of learning-to-learn skills, content thinking skills, and basic reasoning skills. Assessments indicated that students of participating teachers improved in all areas addressed by the teacher training program.

Nickerson, R. S. *Research on the Training of Higher Cognitive Learning and Thinking Skills*. Final Report. Report No. 5560. Cambridge, MA: Bolt, Beranek and Newman, Inc., 1984. (ED 248 455)

Summarizes reports in five categories—programs for teaching thinking skills, theoretical and conceptual reports, litera-

ture reviews and syntheses, reports of empirical research, and other related reports.

Pearson, P. D. *A Context for Instructional Research on Reading Comprehension*. Champaign, IL: University of Illinois at Urbana-Champaign/Cambridge, MA: Bolt, Beranek and Newman, Inc., 1982. (ED 215 307)

Reviews research which demonstrates that skills such as drawing inferences, making predictions, and monitoring one's own understanding of written material can be explicitly taught. Observes that direct teaching of these skills is often overlooked and should be included in reading instruction.

Pogrow, S. "HOTS: A Thinking Skills Program for At-Risk Students." *Principal* 67/4 (1988): 19-24.

Describes the HOTS (Higher Order Thinking Skills) program, elaborates on its appropriateness for the learning needs of at-risk students, and provides results from several user sites demonstrating the program's effectiveness.

Riding, R. J., and Powell, S. D. "The Effect on Reasoning, Reading and Number Performance of Computer-presented Critical Thinking Activities in Five-year-old Children." *Educational Psychology* 7/1 (1987): 55-65.

Compares the reading, mathematics, and reasoning test performance of children participating in 13 weeks of computer-presented problem-solving activities with the performance of children who did not participate. Treatment subjects outperformed controls on reasoning tasks; other results were mixed.

Riding, R. J., and Powell, S. D. "The Improvement of Thinking Skills in Young Children Using Computer Activities: A Replication and Extension." *Educational Psychology* 6/2 (1986): 179-183.

Offers results of a replication study of the effects of computer-presented thinking skills activities on the reasoning test performance of four-year-olds. As in the original study, treatment students outperformed controls, but to an even greater degree.

Ristow, R. S. "The Teaching of Thinking Skills: Does It Improve Creativity?" *Gifted Child Today* 11/2 (1988): 44-46.

Determines the effects of locally developed creative thinking program on the creative thinking test performance of third graders. Program participants outperformed controls on two of the three areas assessed—flexibility and originality—but not on the third—fluency.

Robinson, I. S. *A Program to Incorporate High-Order Thinking Skills into Teaching and Learning for Grades K-3*. Fort Lauderdale, FL: Nova University, 1987. (ED 284 689)

Studies the effect of a series of teacher inservice sessions and the use of the Junior Great Books Program on (1) teachers' skills in and attitudes toward providing thinking skills activities to third graders, and (2) the performance of students on tasks at different levels of Bloom's *The Taxonomy of Educational Objectives*. Significant improvement of both teachers' and students' skill levels resulted.

Sadowski, B. R. "Research Notes: Critical Thinking and CAI." *Journal of Computers in Mathematics and Science Teaching* 4/2 (1984-85): 12-13.

Reviews three studies on the effects of using CAI programs to improve students' critical thinking skills. Results were generally positive among the research surveyed.

Snapp, J. C., and Glover, J. A. "Advance Organizers and Study Questions." *Journal of Educational Research* 83/5 (1990): 266-271.

Seeks to determine the effect on the quality of students' answers to study questions produced by exposing students to advance organizers prior to reading the study material. Experimentals outperformed controls in responding to both lower- and higher-order questions.

Sternberg, R. G., and Bhana, K. "Synthesis of Research on the Effectiveness of Intellectual Skills Programs: Snake-Oil Remedies or Miracle Cures?" *Educational Leadership* 44/2 (1986): 60-67.

Reviews a large number of evaluations of five of the most widely used thinking skills programs—Instrumental Enrichment, Philosophy for Children, SOI (Structure-of-Intellect), Problem Solving and Comprehension, and Odyssey. Finds most of the evaluations sufficiently flawed to call into question the positive claims made for the programs evaluated.

Tenenbaum, G. "The Effect of Quality of Instruction on Higher and Lower Mental Processes and on the Prediction of Summative Achievement." *Journal of Educational Research* 80/2 (1986): 105-114.

Investigates the relative effects of (1) enhanced cues, participation, reinforcement, and feedback-correctives, (2) mastery learning, and (3) conventional instruction on the science and math achievement of elementary and secondary students. The cues, etc. condition was most effective and the most dramatic differences were noted in the higher mental processes.

Tierney, R. J.; Soter, A.; O'Flahavan, J. F.; and McGinley, W. "The effects of reading and writing upon thinking critically." *Reading Research Quarterly* 24/2 (1989): 134-173.

Seeks to determine the learning conditions under which college students are most likely to think critically. Those who read an editorial passage about the specified topic before writing a letter to the editor exhibited more critical thinking than students in other learning conditions.

Whimbey, A. "Test Results From Teaching Thinking." In A. L. Costa (ed.). *Developing Minds: A Resource Book for Teaching Thinking*. Alexandria, VA: Association for Supervision and Curriculum Development, 1985, 269-271.

Reviews studies of the effects thinking skills instruction on test performance and on the transfer of cognitive skills to new and different situations. Found that thinking skills instruction both improves academic performance and enables students to become better problem solvers in other situations, both in and outside of school.

Wong, B. Y. L. "Self-Questioning Instructional Research: A Review." *Review of Educational Research* 55/2 (1985): 227-268.

Reviews 27 studies on the effects of instruction in self-questioning on the prose processing skills of students in the elementary grades through college. Found such instruction effective when it is direct and explicit, training is sufficient, and adequate time to generate questions is provided.

Worsham, A. W., and Austin, G. R. "Effects of Teaching Thinking Skills on SAT Scores." *Educational Leadership* 41/3 (1983): 50-51.

Investigates the effect of *Think*, a thinking skills program, on the SAT verbal scores of low-performing high school seniors in Baltimore. Participants outperformed controls to a "highly significant" degree on all three SAT verbal measures: vocabulary, reading comprehension, and total score.

General References

Alvino, J. "A Glossary of Thinking-Skills Terms." *Learning* 18/6 (1990): 50.

Defines major terms used by thinking skills theorists and program developers. Reminds readers that there are some definitional differences among experts in the field.

Anderson, R. N.; Greene, M. L.; and Loewen, P. S. "Relationships Among Teachers' and Students' Thinking Skills, Sense of Efficacy, and Student Achievement." *The Alberta Journal of Educational Research* 24/2 (1988): 148-165.

Examines relationships among teachers' and students' sense of self-efficacy, reasoning abilities, and student achievement. Twenty-four teachers and their third and sixth grade students participated. Several types of relationships were noted, but causal links were difficult to determine.

Beyer, B. K. "Critical Thinking: What Is It?" *Social Education* 49/4 (1985): 270-276.

Addresses the confusion experienced by educators and others as to what constitutes critical thinking. Offers a brief history of views of critical thinking, information about what critical thinking is *not*, and a current definition agreed upon by many specialists in the field.

Beyth-Marom, R.; Novik, R.; and Sloan, M. "Enhancing Children's Thinking Skills: An Instructional Model for Decision-Making Under Certainty." *Instructional Science* 16/3 (1987): 215-231.

Presents a rationale for providing students instruction in thinking skills and offers a model to be used in teaching students the particular skill of decision-making under certainty, i.e., when full information about each choice is available.

Costa, A. L. "How Can We Recognize Improved Student Thinking?" In A. L. Costa (ed.). *Developing Minds: A Resource Book for Teaching Thinking*. Alexandria, VA: Association for Supervision and Curriculum Development, 1985, 288-290.

Identifies student behavioral indicators that teachers can observe and record to determine whether instruction in thinking skills is having a beneficial effect on students' intellectual development. The author claims that attention to these indicators often provides more useful information than do typical standardized tests.

Gallo, D. "Educating for Empathy, Reason and Imagination." *The Journal of Creative Behavior* 23/2 (1989): 98-115.

Argues that the attributes which characterize empathy correlate with those of effective critical thinking and imagination. Thus, empathetic "role-taking" can sharpen one's imaginative and critical thinking capacities.

Gore, K. "Diskovery: Computers and Thinking Skills: The HOTS Program." *Language Arts* 68/2 (1991): 153-158.

Describes the HOTS (Higher Order Thinking Skills) program in relation to the learning needs of at-risk students, and argues that the close match between learning needs and program provisions has made possible the considerable success of the HOTS curriculum.

Gough, D. *Thinking about Thinking*. Alexandria, VA: National Association of Elementary School Principals, 1991. (ED 327 980)

Summarizes five study reports concerning the nature of higher-order thinking skills and the most effective methods for teaching them. While focusing on different aspects of the topic, the authors of these reports are in agreement that thinking skills should be integrated across the curriculum rather than taught in isolation.

Heiman, M., and Slomianko, J., eds. *Thinking Skills Instruction: Concepts and Techniques*. Washington, DC: National Education Association, 1987. (ED 306 559)

Presents a series of 35 essays on the importance of teaching thinking skills and on instructional strategies for developing these skills in students. The essays address thinking skills instruction within and across disciplines.

Hunter, Brother E. "Focus on Critical Thinking Skills Across the Curriculum." *NASSP Bulletin* 75/532 (1991): 72-76.

Argues that, to be prepared for the future, students need to have questioning minds and develop the skills of critical thinking. Claims that instruction and practice in thinking skills should be incorporated into all secondary-level academic courses.

Kober, N. "What Critical Thinking Approach is Best?" *The School Administrator* 48/1 (1991): 14-17.

Offers transcripts of brief interviews with three experts in the field of teaching thinking skills: Robert Swart, co-director of the Center for Teaching Thinking in

Andover, MA; E.D. Hirsch, author of *Cultural Literacy* and other educational books; and Matthew Lipman, author/developer of the *Philosophy for Children* curriculum.

Norris, S. P. "Synthesis of Research on Critical Thinking." *Educational Leadership* 42/8 (1985): 40-45.

Reviews research on the elements of critical thinking; the nature, merits, and flaws of various critical thinking tests; and frequently encountered errors in reasoning. Argues that critical thinking must be coupled with content knowledge and that better assessments are needed to determine accurately the effectiveness of critical thinking instruction.

Onosko, J. J. "Comparing Teachers' Instruction to Promote Students' Thinking." *Journal of Curriculum Studies* 22/5 (1990): 443-461.

Compares the classroom practices, instructional materials, and assignments of teachers who place a great deal of importance on students' development of higher-order thinking skills with those of teachers who place less value on such skill development.

Orr, J. B., and Klein, M. F. "Instruction in Critical Thinking as a Form of Character Education." *Journal of Curriculum and Supervision* 6/2 (1991): 130-144.

Argues that the development of critical thinking capabilities results less from being taught disembodied "skill bits" than from being "initiated into school communities that grant importance to critical reasoning." Claims that, ideally, instruction in critical thinking should be aimed at fostering the character trait of a "critical spirit."

Orton, R. E., and Lawrenz, F. "A Survey and Analysis of Factors Related to the Teaching of Critical Thinking in Junior High Mathematics Classrooms." *Journal of Research and Development in Education* 23/3 (199): 145-155.

Presents the results of a survey of the classroom practices of 146 junior high mathematics teachers to determine the incidence of activities which tend to foster critical thinking skills and those which tend to impede development of these skills. Outcomes were mixed; implications for teacher education are cited.

Paul, R. W. "Bloom's Taxonomy and Critical Thinking Instruction." *Educational Leadership* 42/8 (1985): 36-39.

Acknowledges the extensive influence of Bloom's *The Taxonomy of Educational Objectives* on educators' thinking and planning. Provides an analysis and critique of the Taxonomy, calling attention to its limitations for developing a critical thinking curriculum.

Paul, R. W. "Critical Thinking Research: A Response to Stephen Norris." *Educational Leadership* 42/8 (1985): 46.

Identifies research sources beyond those identified by Norris' article (see above) that can be helpful in understanding critical thinking and designing instructional programs. Also argues that educators should concentrate on the kinds of thinking and thinking problems that are most common in our everyday lives and address the many obstacles to rational thought.

Pogrow, S. "The HOTS Program: The Role of Computers in Developing Thinking Skills." *Techtrends* 32/2 (1987): 10-13.

Describes ways the HOTS (Higher Order Thinking Skills) program approach differs from other programs using computers to enhance thinking skills. Emphasizes the need for instructional software to "force" the average and below average student to make inferences, rather than simply teaching them about inferences.

Pogrow, S. "Teaching Thinking to At-Risk Elementary Students." *Educational Leadership* 45/7 (1988): 79-85.

Describes the HOTS (Higher Order Thinking Skills) program, provides an overview of users' successful experiences with the program, and cites a series of conclusions about the learning needs of at-risk students and ways to meet those needs.

Presseisen, B. Z. *Critical Thinking and Thinking Skills: State of the Art Definitions and Practice in Public Schools.* Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA, April 1986. (ED 268 536)

Focuses on past and present definitions of and approaches advocated for teaching critical thinking skills, including overviews of the writings of key theorists. Discusses the current interest in improving students' critical thinking skills and instructional approaches for doing so. Makes recommendations for future research.

Renner, J. W. *Curricula Which Promote Reasoning*. Paper presented at the United States-Japan Seminar on Science Education, Honolulu, HI, September 14-20, 1986. (ED 278 565)

Cites findings indicating that ninth grade science students achieve more content understanding, retain more information, and exhibit higher IQ measurements when taught using an approach called the "learning cycle" than when traditionally taught.

Schmidt, P. "A Concern About...Restructuring Learning to Improve the Teaching of Thinking and Reasoning for All Students." *Concerns* 22 (1991): 24-31.

Discusses issues related to higher-order learning, including definitions, relevance in contemporary life, principles to guide educators as they restructure their approaches to include greater focus on higher-order learning, teacher training needs, and recommended steps for state education agencies.

Strahan, D. B. "A Research-Based Approach to Effective Middle Grades Instruction." *Clearing House* 60/4 (1986): 149-155.

Discusses research on the development of reasoning skills in adolescents in relation to the general effective teaching research. Describes and gives examples of a "guided thinking" approach to instruction which is based on findings from these two bodies of research.

Tingle, J. B., and Good, R. "Effects of Cooperative Grouping on Stoichiometric Problem Solving in High School Chemistry." *Journal of Research in Science Teaching* 27/7 (1990): 671-683.

Compares the chemistry problem-solving performance of students working individually with those in cooperative groups whose members were organized heterogeneously according to proportional reasoning ability. No statistically significant differences were noted.

This publication is based on work sponsored wholly, or in part, by the Office of Educational Research and Improvement (OERI), U.S. Department of Education, under Contract Number RP91002001. The content of this publication does not necessarily reflect the views of OERI, the Department, or any other agency of the U.S. Government.

November 1991

SCHOOL IMPROVEMENT RESEARCH SERIES
"Research You Can Use"

Close-Up #12

Staff Development

Jocelyn A. Butler

Introduction

School and district staff members, like others in the workforce, are becoming more and more involved in seeking and taking advantage of opportunities to improve their professional skills and increase their effectiveness. The literature on adult learning theory and effective staff development programs together provide a powerful knowledge base that offers guidance in the design, development and implementation of effective staff development programs for teachers and administrators.

This combined knowledge base includes experiential and theoretical discussions, as well as more traditional research studies. Discussions of how and why adults learn and the ways to facilitate that learning, for example, are primarily theoretical in nature; but there is a good deal of research on how to structure staff development programs to support learning. In addition, there is a small but growing group of studies demonstrating the relationship between effective staff development and improved student performance.

This *Close-Up* focuses on three areas of effective staff development: (1) the needs and characteristics of participant learners; (2) the program characteristics of purposes, structure, content, process and follow-up; and (3) the organizational characteristics that contribute to or support effective staff development. Each of these three areas is examined separately in the following analysis.

The Participant Learner

> *The learner is a person who wants something; the learner is a person who notices something; the learner is a person who does something; the learner is a person who gets something.*
> John Dollard, in Kidd 1975, p. 17

LEARNING AND CHANGE

A working understanding of the nature of learning is important in understanding the characteristics of the participant learner. While myriad definitions can be found, Smith (1982) suggests that the word *learning* has been used to describe several *situations* and that understanding each is important:

- When learning refers to a *product*, the emphasis is on the outcome of an experience: the acquisition of a particular set of skills or knowledge.
- When learning describes a *process*, the emphasis is on what happens when a

Northwest Regional Educational Laboratory
101 S.W. Main Street, Suite 500
Portland, Oregon 97204
Telephone (503) 275-9500

School Improvement Program

learning experience takes place: how learners seek to meet needs and reach goals.

- When learning describes a *function*, the emphasis is on aspects believed to help produce learning: how learners are motivated, what brings about change (p. 34-35).

Effective staff development programs address all three types of learning situations. Using knowledge about how learning is produced (function) and about what happens when people learn (process), participants in effective programs develop new knowledge and skills as teachers and administrators (product). Effective programs themselves become vehicles for learning as an "active process of transmuting new knowledge, values and skills into behavior" (Smith, p. 45).

Kolb (1984), in his work on learning styles, identifies three types of learning theory:

- **Rationalist** (including cognitive theories): Learning focuses on the acquisition, manipulation and recall of abstract symbols.

- **Behavioral**: Learning is a process of changing behavior with no role for consciousness and subjective experience in the learning process.

- **Experiential**: Holistic, integrative learning is a combination of experience, perception, cognition and behavior.

According to Zemke (1981), "No single theory or set of theories seems to have an arm-lock on understanding adults or helping us work effectively and efficiently with them" (p. 45). Instead, knowledge about the various theoretical approaches is useful in designing staff development that is suitable and effective for a broad variety of learners.

In any learning situation, learners undergo some type of *change*, and understanding the nature of change is also important. Research on the implementation of innovations has defined elements of change that can be applied to staff development programs (Hall and Loucks 1978):

- Change is a *process*, not an event. Introduction to and training in new ways of doing things does not assure that people will immediately begin to do them. Change is a process that must unfold over time.

- Change must be understood in terms of what happens to *individuals*. Understanding how individual teachers and administrators may respond to changing their behaviors and practices is critical.

- Change in individuals is a highly *personal* experience. Each person perceives, feels about, and reacts to change in an individual way.

- Change by individuals entails *growth*, both in terms of how they feel about the change and their skill in applying any innovations. This incremental growth is part of the process of change which an individual undergoes over time.

Effective training programs, then, take into account the nature of learning and the fact that learning requires change.

ADULT LEARNERS

Teachers and administrators are experienced professionals with extensive backgrounds in educational practice. They are experienced, capable adult learners, and the variety of experiences they bring with them to development programs affects what and how they learn.

In reviewing the literature on adult learning, including examination of all types of learning theory, the following common descriptors of adult learners emerge:

- Adults learn throughout their lives. Age does not reduce a person's ability to learn but may reduce the speed at which learning takes place. In addition, because of time elapsed since earlier learning experiences, adults may underestimate their own abilities to learn and/or may need additional time to adjust to new learning conditions.

- Adults exhibit a variety of learning styles, and there is no one "right" way of learning. They learn in different ways at different times and for varying reasons.

- The adult learner is a person with a sense of self, bringing all previous life experiences, both personal and professional, to bear on new learning. Past experiences affect what the learner learns and are the foundation for current learning. Adults learn best when new learnings are demonstrably tied to or built upon past experiences.

- Adult learners' stages of development, whether personal (cognitive, moral, ego, conceptual), chronological (early adulthood, mid-life, etc.) or professional (new or experienced teacher, etc.), profoundly affect their learning.

- Adult learners exist in situations separate from the learning context. They are motivated to learn by changes in their situations and learn best when new learnings apply in practical ways and/or are relevant to the changes in their situations.

- The adult learner controls what is learned, selecting new information and/or deciding how to use it, and this takes place at both the conscious and unconscious levels.

- Adults tend to be problem-centered rather than subject-centered learners and learn best through practical applications of what they have learned.

- Adult learners must be treated as adults and respected as self-directed persons. They learn best in nonthreatening environments of trust and mutual respect.

- The optimum role of the adult learner in the learning situation is that of a self-directed, self-motivated manager of personal learning who collaborates as an active participant in the learning process and takes responsibility for learning.

- New learning is followed by a period of reflection to facilitate integration and application of new knowledge and skills.

- Continued learning depends on achieving satisfaction, especially in the sense of making progress toward learning goals that reflect the learner's own goals.

Effective staff development programs should take into account the nature of adult learners and the need for making learning accessible to them. Smith (1982) suggests that there are six optimum conditions for learning and that adults learn best when these six conditions are met:

1. They feel the need to learn and have input into what, why and how they will learn.

2. Learning's content and processes bear a perceived and meaningful relationship to past experience, and experience is effectively utilized as a resource for learning.

3. What is to be learned relates optimally to the individual's developmental changes and life tasks.

4. The amount of autonomy exercised by the learner is congruent with that required by the mode or method utilized.

5. They learn in a climate that minimizes anxiety and encourages freedom to experiment.

6. Their learning styles are taken into account (p. 47-49).

Adult learners have special needs and special strengths and are themselves a valuable resource for each other in the learning process.

MOTIVATING ADULTS TO LEARN

Information from the literature about motivating adults to learn supplements knowledge about learning, change, and the adult learner to increase effectiveness of staff development programs. Based on an extensive review, Wlodkowski (1985) lists specific factors that have impact on motivation:

- **Attitude**: the learner's combination of concepts, information and emotions about the learning that results in a predisposition to respond favorably

- **Need**: the current condition of the learner, experienced as an internal force moving the learner toward the goal

- **Stimulation**: any change in perception or experience of the external environment that prompts the learner's action
- **Affect**: the learner's emotional experience (feelings, concerns, passions)
- **Competence**: the learner's sense of effectively interacting with the environment
- **Reinforcement**: the learning event maintains or increases the probability that the learner will achieve the appropriate response.

These major motivational factors exert maximum influence at particular times in a learning sequence. At the *beginning* of the learning process, the learner's attitudes (toward the environment, the instructor, the topic at hand, and the self) and the learner's needs (immediate and at the time of the learning) should be acknowledged and addressed. *During* the learning sequence, stimulation (via the learning experience itself) and the learner's affect (feelings about self, topic, etc.) should be carefully monitored and acknowledged. At the *end* of the sequence, the learner must feel a sense of competence (increased value because of this new learning) and should be reinforced (this is the right learning). Appropriate attention and response to these learner factors at the appropriate time during the learning process can dramatically increase motivation.

Keller (1987) outlines a strategy for attending to these factors, his "ARCS" model. Programs should get participants' attention ("A") with content that is attractive, contain content with high relevance ("R"), stimulate the development of participants' confidence ("C"), and result in learner satisfaction ("S").

Smith (1982) adds that learners' expectations are critical to their motivation and that programs should create the expectation that learners will succeed. Care should also be taken that excessive structure and authority in the program do not become a disincentive for learning.

Generally speaking, learners need to be interested, successful, and supported in their learning, and such intrinsic motivators are critical to program success. Lanier and Little (1986) caution against the use of external motivation in the form of cash incentives, citing several studies in which paying teachers/administrators to participate is efficient in attracting them to professional development activities but is inversely related to classroom implementation of the recommended practices.

TEACHERS AS LEARNERS

Staff development programs focus on teachers and/or administrators, a population of adult learners with specialized experience and needs. Simmons and Schuette (1988) suggest that the current paradigm for teachers is that of teacher as reflective practitioner—"one who makes instructional decisions consciously and tentatively, critically considers a full range of pertinent contextual and pedagogical factors, actively seeks evidence about the results, and continues to modify these decisions as the situation warrants" (p. 20).

Exploring this population as a whole, Fullan, Bennett, and Rolheiser-Bennett (1990) examine what they call teachers-as-learners, a group including all professional educators (classroom teachers, teacher leaders, head teachers, vice-principals, and principals). They propose that there are four key aspects of teacher-as-learner:

- **Technical repertoire**: mastery of a variety of skills and practices which increases instructional certainty
- **Reflective practice**: careful consideration that results in enhancement of clarity, meaning and coherence in teacher practice
- **Research**: exploration and investigation to discover ways to improve practice
- **Collaboration**: focused interchange with fellow teachers to give and receive ideas and assistance.

"The important question," they say, "is how to integrate and establish the strengths of each of these four traditions in the individual teacher as learner. Rarely have all four received intensive attention in the same setting" (p. 15).

Program Characteristics

Sustained improvements in schools will not occur without changes in the quality of learning experiences on the part of those who run the schools.
Fullan 1991, p. 344

PURPOSES

A considerable body of research now exists which examines the characteristics of effective staff development programs. This research base includes teacher inservice experiments; basic skills instruction experiments; teacher effects research; implementation research; descriptive survey research on teachers' preferences and attitudes; and research on teacher expectations, principals and achievement testing (Gall and Renchler 1985). These studies show that there are identifiable characteristics which contribute to the success of staff development programs.

Generally, the *desired outcome* of staff development is one of the following:

- **Information transfer**. Participants receive information about new approaches, techniques, requirements, etc.
- **Skill acquisition**. Participants are taught a particular way to do something.
- **Behavior change**. New information and/or skills are taught with the expectation that participants will apply the new learning and change their behaviors (Korinek 1985).

Of the three, the longest-lasting effects are derived from the behavior-change type of staff development program.

Joyce and Showers (1982) identify four *levels of impact* for staff development programs, in terms of the response of the participants:

- **Awareness**. Participants realize the importance of new information and begin to focus on it.
- **Concepts and organized knowledge**. Concepts are understood and organized.
- **Principles and skills**. Principles and tools for action are understood and participants can think effectively about them and have the skills needed to act to apply them.
- **Application and problem solving**. Participants transfer new information in problem-solving fashion to real-life professional situations.

At the application level of impact, participants in development programs have internalized the new content and use it.

There are a variety of *reasons* for staff development:

- **Personal professional development**: a self-directed approach based on individual needs and choice
- **Credentialing**: successful completion of a program as a requirement for licensing or certification
- **Induction**: supplementing skills and knowledge for the newly hired
- **School improvement**: staff development to improve student performance by improving staff skills and knowledge (Gall and Renchler 1985).

Lanier and Little (1986) note that staff development programs also:

- Serve teachers as individual members of a profession, adding knowledge, skills, and intellectual vigor to professional life
- Satisfy bureaucratic and career advancement purposes
- Involve teachers as responsible members of an institution.

STRUCTURES

Professional staff development comes in many forms. It can take place in the workplace or in some other environment, it can be required or voluntary, it can be offered by an organization or sought independently by an individual. Two-hour lectures, three-day conferences and year-long courses can all be considered staff development.

Sparks and Loucks-Horsley (1990), in their extensive review of the research, suggest that five types of staff development models are used for teachers:

- **Individually guided staff development**. Individuals identify, plan and pursue activities they believe will support their own learning.
- **Observation/assessment**. Teachers are observed directly and given objective data and feedback about their classroom performance.
- **Involvement in a development/improvement process**. Teachers develop curriculum, design programs, or become involved in school improvement processes to solve general or specific problems.
- **Training**. Teachers engage in individual or group instruction in which they acquire knowledge or skills.
- **Inquiry**. Teachers identify and collect data in an area of interest, analyze and interpret the data, and apply their findings to their own practice.

Of these five models, the most widely used and researched is *training*. Sparks and Loucks-Horsley cite a number of studies in which training programs have been tied to improvements in particular types of student performance, underscoring the appropriateness of this approach to staff development. Gage (1984) reports that in eight of nine experimental studies, "inservice education was fairly effective—not with all teachers and not with all teaching practices but effective enough to change teachers and improve student achievement, or attitudes, or behavior" (p. 92). Fullan (1990) and others, however, suggest that the *inquiry* approach will become more widely used as the teacher-as-learner/teacher-as-reflective-practitioner paradigm takes hold.

In a review of the work of other researchers, the following points related to effective *structures* for staff development programs appear consistently across studies:

- Designs are based on principles of adult learning and a full understanding of the process of change.
- Programs are conducted in school settings.
- Development takes place in more than one incident, and incidents are spaced over time: they are conducted long enough and often enough to assure that participants progressively gain knowledge, skill and confidence.
- Training is conveniently scheduled to avoid interfering with ongoing job requirements of participants.
- Development activities take place at a convenient location.
- Trainers have credibility with the participants.
- Participants are involved in the planning, development and presentation of the training program.

CONTENT

Gall and Renchler (1985) report that, "Research shows the most effective staff development programs are designed for school improvement rather than for staff personal professional improvement" (p. vii).

Review of the research provides the following characteristics of effective *content* for staff development programs:

- Programs are planned in response to assessed needs of the participants, and content matches the current developmental level of participants (Wood, et al. 1981; Griffin 1982).
- The focus is school improvement rather than personal professional development (Gall and Renchler 1985).
- Content is concrete and aimed at developing specific skills rather than just introducing new concepts. The theoretical basis or rationale is part of the content about new skills (Berman and McLaughlin 1975; Joyce and Showers 1980).
- Professional development focuses on job- or program-related tasks faced by teachers (Fullan 1982; Purkey and Smith 1983).

- There are clear, specific goals and objectives related to implementation (Wood, et al. 1981; Griffin 1982; Orlich 1984).

- Content is research based and is tied to student performance (Sparks 1983; Gall and Renchler 1985).

- The use of new behaviors is made very clear, and applicability to individuals' home situations is understood (Sparks 1983; Orlich 1984).

- Between-workshop content, such as observation, visitation and discussion, is included to facilitate implementation (Fullan 1982; Sparks 1983; Gall and Renchler 1985).

Overall, content of staff development programs reflects clear program goals and operational objectives defining what participants will learn and how they will be able to use the new learning. Content builds on their prior experience, clearly relates to their home situations and prepares them to apply what they have learned.

Research support for the selected program content is clear, providing the rationale for applications. Both knowledge (the understanding of background and concepts) and skills (the ability to put knowledge into operation) are included in the program. Participant evaluation and accountability are integrated into the program to increase incentives for learning and application.

PROCESSES

The internal structures or instructional processes used in the design and delivery of staff development programs appear to influence the programs' level of impact. Several researchers have studied program components to identify those which are essential. Joyce and Showers (1980) identified five components of effective development programs that have become widely acknowledged as important:

- Presentation of theory or description of the new skill or strategy

- Modeling or demonstration of skills or strategic models

- Practice in simulated and actual settings

- Structured and open-ended feedback to provide information about performance in the practice

- Coaching for application—the follow-up work to help with the at-home implementation of the new skill and/or knowledge.

These components vary in their importance to reaching the transfer level of impact, with evidence strongest for modeling and feedback. Joyce and Showers hypothesize that the combination of all five components has the greatest power.

Sparks (1983) suggests a list of components that includes:

- Diagnosing and prescribing—the pre-program assessment of participants' needs and ways to meet them

- Giving information and demonstrating its application

- Discussing application

- Practicing and giving feedback

- Coaching.

Other researchers emphasize the importance of follow-up for sessions, noting that coaching is but one of a number of activities to assist in transfer of new learning. Little (1986) adds that staff development is most influential where it ensures collaboration adequate to produce shared understanding, shared investment, thoughtful development, and the fair, rigorous test of selected ideas; and where it requires collective participation in training *and* implementation.

Generally, the research emphasizes a systematic process approach to move participants from awareness of the new learning through transfer and application, thereby promoting long-term behavior change through staff development. "There is," as Wade (1984) says, "no magical combination of methods for successful inservice."

The following list, culled from a number of sources, highlights other key process elements of effective staff development programs:

- Participants are clearly expected to be actively involved in learning and to take responsibility for their own learning; self-directed learning is emphasized.

- The program takes into account that participants will have different concerns at different stages in the process of change.

- Content is presented in a variety of modes and through a variety of activities, including opportunities for both individual and whole-group instruction and small-group instruction.

- Complex knowledge and/or skills are introduced gradually, with the understanding that the more complex the content, the more time is needed to learn and practice it.

- There is reinforcement of learning both within the program and as part of the post-program follow-up.

- Opportunities for collegial learning are integrated into the program: participants work with and learn from each other.

- Readiness activities or self-diagnosis are included at the beginning of the program to ascertain participants' current skill levels.

- New material is presented and then modeled in the course of the program.

- There are opportunities for practice and experimentation in nonthreatening situations, so participants can receive nonthreatening feedback on something they produce (e.g., a presentation, a product).

To facilitate learning, staff development programs are delivered in more than one incident over an extended period of time. The selected delivery model includes presentation of new material, demonstration, practice, feedback, and follow-up for evaluation and accountability. There are readiness activities as the program begins, and complex new material is presented incrementally, with repeated checking for understanding. The delivery of the program includes a variety of instructional modes and activities (individual and group learning, lecture, discussion, video and/or role-play, etc.). As part of the program design, participants learn collegially, in cooperative situations, with and from each other.

FOLLOW-UP

A follow-up component to staff development programs provides support and/or assistance in the actual implementation and application of the new knowledge/skills. This follow-up should include some type of accountability to assure that implementation actually takes place and application is maintained.

Fullan (1982) describes follow-through as crucial: "A series of several sessions, with intervals between in which people have the chance to try things (with some access to help or to other resources), is much more powerful than even the most stimulating one-shot workshop" (p. 286). Preparation for evaluating application and/or implementation should be built into the program.

Joyce and Showers (1988) report that follow-up coaching results in teachers generally using new instructional strategies introduced in staff development programs more often and with greater skill, using them more appropriately, exhibiting better long-term retention of knowledge about and skills with strategies, being more likely to explain new models to students, and having generally clearer understanding of the purposes and uses of new strategies.

Showers, et al. (1987) examine the conditions necessary for actual transference of new skills into regular use: "For a complex model of teaching (to reach implementation), we estimate that about 25 teaching episodes during which the new strategy is used are necessary before all the conditions of transfer are achieved" (p. 86). This repeated practice is necessary to enable and achieve teachers' full integration of the new strategy into their teaching repertoire and to assure that the new approach will not be lost due to disuse. There need to be at least 25 follow-up sessions for real transference of a new skill to take place. Most staff development programs do not offer this degree of application: follow-up is critical to the integration of the new knowledge or skill.

Sparks (1986) extended the examination of training processes to differentiate between transference among teachers who attended workshops only, who experienced coaching by the expert trainer, and who followed training workshops with peer observation with feedback. In this case, peer observation with feedback is more effective than workshops only or trainer coaching.

To reinforce and monitor new behaviors, to assist in implementation and/or to provide support in transferring new knowledge and skills to the home situation, Sparks adds, there is systematic, long-term follow-up of program participants. Participants are accountable for implementing the new knowledge and skills. To help them in this implementation, the program provides for feedback as part of the follow-up activities.

Organizational Context

> *Staff development presented as a form of remediation for teachers deficient in certain skills or attributes (a common implication in current practice) will encounter resistance. More appropriately, staff development should be based on the expressed needs of teachers revealed as part of the process of collaborative planning and collegial relationships.*
> Purkey and Smith 1983, p. 443-444

Districts, schools, administrators and teachers initiate, select and pursue staff development programs to improve teacher and administrator knowledge/skills and contribute to improving schools. Researchers have identified aspects of organizations that, by supporting staff development, can support school improvement efforts, and a number of them address the issue of the "collaborative culture" in schools—a schoolwide expectation that teachers work and learn together to improve the school.

Staff development represents a change within the organization, and information about support at the organizational level for the change effort is important. Miles (1983) explores the stages of change wherein an innovation is begun, often through a staff development program (initiation), put into place in classrooms (implementation), and eventually becomes a part of the way the school does business (institutionalization). While initial enthusiasm about and skill in using the innovation are important, they do not alone lead to institutionalization. The group using the innovation must grow to stabilize it, and staff changes could jeopardize its continued use. Administrator support is crucial: "Making clearcut changes in organizational structure, rules and procedures seems essential both to stabilize the innovation and to buffer against turnover" (p. 19).

Little (1982) identifies two major characteristics of schools that contribute to successful staff development programs. First, these schools exhibit a *norm of collegiality*, wherein there is the expectation for shared work in a cooperative atmosphere for all teachers. Second, there is a schoolwide *norm of continuous improvement*, with high expectations for analysis, evaluation and experimentation. Teachers work together with the understanding that the school will continue to improve.

When Fullan, et al. (1990) outline their basic features of school improvement (as opposed to characteristics of effective schools), they cite Little's two norms. In addition, they cite a *shared purpose and a set of structures that supports school improvements*. Those structures include organizational arrangements, roles and formal policies that explicitly create working conditions to support and inspire work toward school improvement. Such factors as time for joint planning, joint teaching arrangements and staff development policies, new roles, and others are suggested as contributing to school improvement. These factors, and the general climate they produce in the school, contribute to the success of staff development efforts. In examining the staff development literature, Bennett (1987) found support for two major requirements for the successful implementation of training content:

- There is an environment that encourages frequent talk and experimentation in the practice of teaching.

- Teachers and administrators frequently observe each other for feedback, reflection and support regarding the teaching process (p. 5).

Sparks and Loucks-Horsley (1990) identify characteristics of organizations where staff development is most successful:

- Staff members have a common, coherent set of goals and objectives that they have helped formulate, reflecting high expectations of themselves and their students.

- Administrators exercise strong leadership by promoting a norm of collegiality, minimizing status differences between their staff members and themselves, promoting informal communication, and reducing their own need to use formal controls to achieve coordination.

- Administrators and teachers place high priority on staff development and continuous improvement of personal skills, promoting formal training programs, informal sharing of job knowledge, and a norm of continuous improvement applicable to all.

- Administrators and teachers make heavy use of a variety of formal and informal processes for monitoring progress toward goals, using them to identify obstacles to such progress and ways of overcoming these obstacles, rather than using them to make summary judgments regarding the competence of particular staff members (Conley and Bacharach 1987).

- Knowledge, expertise, and resources, including time, are drawn on appropriately, yet liberally, to initiate and support the pursuit of staff development goals (p. 245).

While supporting the value of collegiality, Little (1989) warns against its use as a mandated approach in a situation where there are no other organizational structures to support it. This "induced collaboration" carries high costs in time spent on adjusting to working together and in risk of being exposed to new kinds of criticism and conflict in small groups. Forced collegiality doesn't work: "At issue here is the congruence or fit between naturally occurring relations among teachers and those collaborations that emerge in the course of institutionally sponsored initiatives" (p. 29).

Continuing her examination, Little finds that collegiality alone is not the answer to school improvement or effective staff development programs:

> Patterns of interaction that support mutual assistance or routine sharing may count well for maintaining a certain level of workforce stability, teacher satisfaction and a performance "floor"; they seem less likely, however, to account for high rates of innovation or for high levels of collective commitment to specific curricular or instructional policies.

Hargreaves and Dawe (1989) discuss the concept of a collaborative culture that must be facilitated and supported by leadership so that informal collegiality supports the formal collaborations required in staff development programs. They warn against "contrived collegiality" which can undermine the development of this collegial culture.

Mahaffy (1990) suggests a series of conditions that should be in place *prior to the introduction of collaborative processes* in an organization, and these, too, relate to staff development efforts:

- Some predisposition exists among faculty for improvement.

- The building principal understands and supports the concepts of collaboration and norms of collegiality.

- The school is the unit for change.

- Teachers and administrators are seen as an important resource, and an effort is made to support and take advantage of this.

- Support for enhancing teacher effectiveness is based on knowledge of what teachers do (p. 29).

Griffin (1982) identifies a number of organizational context issues that might affect the design of staff development and change efforts. He mentions the institutional norms, the school's history of change, and the importance of the leadership's ability to analyze the characteristics of the setting and school. Griffin also suggests ways to use knowledge of research to ascertain the need for staff development:

- Determine whether teachers, administrators, and teacher educators agree as to what should be the focus of staff development.

- Determine preferred modes of delivering staff development.

- Diagnose concerns of participants.

- Determine levels of use of a desired/ mandated change in practice.

- Infer appropriate interventions.

- Promote methodologically sound means of determining teacher competence.

- Establish a baseline from which staff development strategies can be formulated.

In the Rand Study, Berman and McLaughlin (1975) assert that it is critical that there be opportunity for mutual adaptation of any innovation that is the subject of staff development. In this process, the situation in the organization must adjust to accommodate the new approach/knowledge/skill, and the innovation in turn must be be flexible enough to fit into the organizational and situational context.

Pink's (1990) study of urban districts describes common *barriers* to staff development program effectiveness and argues that these should be addressed by schools and districts *prior to initial planning for school improvement projects*. Schools and districts should:

- Assure there is adequate time for staff to plan for and learn about the project and to become proficient in skills. The intervention must be tailored to local needs in the school.

- Take into account the limitations of teachers and administrators in project schools. People are at different developmental levels, and using the same staff development for all cannot meet all individuals' needs.

- Plan for technical assistance for program conceptualization, implementation and evaluation. Expedient decisions not grounded in research cause more harm than good.

- Provide for central office support. A lack of central office support for an intervention is frequently a "kiss of death" for the program.

- Provide for local management of school improvement. "Centralized decision making fuels a management model that emphasizes compliance, which in turn leaves little room for innovation at the school level. Districts need to support the involvement of teachers and administrators at the school level in collaborative decision making" (p. 56).

- Acknowledge and plan for the fact that effective school improvement projects by their very nature will disrupt existing organization practices. "Encouraging schools to develop innovative ways to meet their goals and supporting such innovations with waivers from existing regulations seems a promising strategy" (p. 56).

- Be prepared to understand and accommodate site-specific (contextual) differences among schools in both the planning and implementation phases. "A promising way to solve this problem is to support each school (as it works to) identify and resolve its own problems. We must acknowledge, however, that such a focus on school-generated improvement strategies requires the adoption of a different change model from that currently in use in most urban districts—it suggests a move to a centrally supported but bottom-up model and away from a centrally mandated top-down model" (p. 56-57).

- Provide adequate funds. Underfunding a project invariably results in problems that cannot be addressed until the next fiscal year, slowing the improvement process.

- Consider ways to reduce teacher mobility to maintain project impetus. "Districts must give some thought to ways to provide greater stability for teachers (and in some cases administrators) in schools engaged in school improvement projects" (p. 57).

- Placing too many competing demands on teachers and administrators sets up a situation where school improvement projects cannot succeed. "Districts must clarify and simplify what they want teachers to do. These expectations must be sensitive to the demands in the school context—this suggests that both the level and speed of implementation will vary from school to school" (p. 57).

- Avoid moving from project to project. "Districts must stay with an intervention long enough to implement it fully and understand what impact it is having: two to three years appears to be the least amount of time needed" (p. 58).

- Consider developing a partnership with a university to strengthen the conceptualization, implementation and evaluation of the intervention. "Districts should explore developing long-term collaborative relationships with universities (as well as other agencies in the community) to maximize the impact of school improvement interventions" (p. 58).

In his re-examination of educational change, Fullan (1991) proposes three guidelines for organizations undertaking professional development:

- Guideline 1 recommends that faculties and schools use three interrelated strategies—faculty renewal, program innovation, and knowledge production—to establish their new niche as respected and effective professional schools (p. 341).

- Guideline 2 is that learning—in this case of adults—must permeate everything the district and school does; it must be held as equally important for all staff regardless of position; districts and schools must strive to coordinate and integrate staff development (p. 342).

- Guideline 3 is that all promoters of professional development should pay attention to and worry about two fundamental requirements: (1) incorporating the attributes of successful professional development in as many activities as possible and (2) ensuring that the ultimate purpose of professional development is less to implement a specific innovation or policy and more to create individual and organizational habits and structures that make continuous learning a valued and endemic part of the culture of schools and teaching (p. 343).

As a final note on organizational context, staff development must be seen as an integral part of teachers' professional lives, not as remediation with the implication that teachers are not adequately doing their jobs. Just as teachers have learned to give homework as a matter of course—never as punishment—so districts must learn the critical contribution that job-embedded professional development can contribute to general school excellence (Purkey and Smith 1983; Howey, et al. 1985).

Staff Development and Student Performance

> *Neither training alone nor training followed by implementation were sufficient conditions for change. These particular belief and attitude changes occurred only when training and implementation were combined with evidence of improved student learning.*
> Guskey 1985

It is widely assumed that the improvement of teacher practice results in improved student performance. While there are few careful studies examining the important connection between staff development programs and improved student performance, a small group of studies (Gage 1984; Sparks and Loucks-Horsley 1990) do indicate that staff development programs can have positive effect on student performance.

Joyce, et al. (1989) found that a particular staff development approach, given time and support for full implementation, had direct, dramatic effect on student performance. Further studies of this type are needed to support what is generally believed to be true: staff development can and does have impact on student performance.

There is virtually no question that effective staff development programs do change teacher practice. Whether training program, individual inquiry or any of the other models outlined earlier, staff development continues to be a critical element that contributes to teacher effectiveness and school improvement. As Fullan (1991) notes, "The ultimate goal is changing the culture of learning for both adults and students so that engagement and betterment is a way of life in schools" (p. 344).

Key References

Bennett, B. B. *The Effectiveness of Staff Development Training Practices: A Meta-Analysis*. Dissertation. Eugene, OR: Division of Teacher Education and the Graduate School of the University of Oregon, 1987.

A meta-analysis synthesizing experimental research on training practices with an emphasis on inservice teacher education. The study looks at effectiveness of staff development training procedures on teachers' attitudes, knowledge and skill acquisition, and transfer of training to classroom practice.

Berman, P., and McLaughlin, M. W. *Federal Programs Supporting Educational Change, Vol. IV: The Findings in Review*. Santa Monica, CA: Rand, April 1975.

Report of findings of the Rand study of change agent programs identifying what tends to promote various kinds of changes in the school and what doesn't. This volume reports a three-phase model of innovation process (initiation, implementation, incorporation) and describes the concept of mutual adaptation.

Brundage, D. H., and Mackeracher, D. *Adult Learning Principles and Their Application to Program Planning*. Toronto: Ministry of Education, 1980.

Description and strategies for application of adult learning principles developed through analysis and synthesis of literature in adult education, andragogy, teaching and learning, and other related fields. Excellent resource for background and application.

Corrigan, D.; Haberman, M.; and Howey, K. *Adult Learning and Development: Implications for In-Service Teacher Education – An American Point of View*. Paris: Centre for Educational Research and Innovation, Organisation for Economic Co-Operation and Development, 1979.

Examination of a variety of theoretic orientations to adult learning and conceptions of adult development, plus a look at implications for inservice education and suggestions for future practice.

Fullan, M. *The Meaning of Educational Change*. Ontario: OISE Press/The Ontario Institute for Studies in Education, 1982.

An examination of many facets of educational change, including information about teacher preparation and development, with guidelines for professional development programs.

________; Bennett, B.; and Rolheiser-Bennett, C. "Linking Classroom and School Improvement." *Educational Leadership* 47:8 (May 1990): 13-19.

An examination of three interrelated areas—classroom improvement, teacher as learner, school improvement—with emphasis on "teacher-as-learner" as the link. Teacher as learner involves four aspects: the technical, the reflective, the research and the collaborative. The balance among these aspects affects specific learnings (new techniques, etc.) and generic learnings (increase of all four aspects in individual teachers).

________, with Stiegelbauer, S. *The New Meaning of Educational Change*. New York: Teachers College Press, 1991.

Examination of the processes of educational change, based on extensive literature review, including discussion of roles and strategies and the critical need for change in school culture to complement and support reform.

Gage, N. "What Do We Know about Teaching Effectiveness?" *Phi Delta Kappan* 66:2 (October 1984): 87-93.

Review of research on teaching with major focus on nine experimental studies of changes in instructional practice.

Gall, M. D., and Renchler, R. S. *Effective Development for Teachers: A Research-Based Model*. Eugene, OR: ERIC Clearinghouse on Educational Management, College of Education, University of Oregon, 1985.

A staff development model incorporating 27 research-based dimensions, including those identified in four inservice experiments. The model focuses on teacher and student objectives, delivery system, organizational context, governance, and selection and evaluation.

Glatthorn, A. A. "Cooperative Professional Development: Peer-Centered Options for Teacher Growth." *Educational Leadership* 45:3 (November 1987): 31-35.

Discussion of various approaches to peer interactions that can support professional growth: professional dialogue, curriculum development, peer supervision, peer coaching, and action research, with suggestions for implementing cooperative professional development.

Griffin, G. A. *Staff Development*. Paper prepared for the NIE Teaching Synthesis Conference, Airlie House, VA, 1982.

Review of research on staff development organized into four main areas: context, assessment (needs assessment), content, and process. Identifies issues in each area and describes an eight-point profile of a research-derived staff development program. Excellent annotated bibliography.

Guskey, T. R. "Staff Development and Teacher Change." *Educational Leadership* 42:7 (April 1985): 57-60.

Examination of research supports the fact that teachers' attitudes and beliefs change only after they see changes in student performance due to change in their practice.

Hall, G. E., and Loucks, S. "Teacher Concerns as a Basis for Facilitating and Personalizing Staff Development." *Teachers College Record* 80:1 (September 1978): 36-53.

Report of research on change in schools, particularly the diagnosis of group and individual needs during the process of adopting an innovation.

Hargreaves, A., and Dawe, R. *Coaching as Unreflective Practice: Contrived Collegiality or Collaborative Culture?* Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA, March 1989.

An examination of a specific type of coaching which is becoming more and more widespread and may be a new "administrative apparatus of surveillance and control" instead of a supportive process for individual teacher development.

Howey, K. R.; Matthes, W. A.; and Zimpher, N. L. *Issues and Problems in Professional Development*. Oak Brook, IL: North Central Regional Educational Laboratory, 1985.

A literature review focused on recruitment and initial, inductive and inservice education of teachers, including a list of characteristics of effective staff development programs.

Joyce, B.; Murphy, C.; Showers, B.; and Murphy, J. "School Renewal as Cultural Change." *Educational Leadership* 47:3 (November 1989): 70-77.

Report of a study of the use of teacher study groups, providing regular training and goal setting and the subsequent positive impact on both teacher practice and student achievement and behavior.

________, and Showers, B. "Improving Inservice Training: The Messages of Research." *Educational Leadership* 37:5 (February 1980): 379-385.

Examination of the research on the ability of teachers to acquire teaching skills and strategies with findings that teachers are "wonderful learners," that specific conditions needed for learning are not common in most inservice settings, and that those conditions are identified by research.

________. "The Coaching of Teaching." *Educational Leadership* 45:3 (October 1982): 27-30.

Description of the effects of coaching in the implementation of new practices learned in staff development programs.

________. *Student Achievement Through Staff Development*. New York: Longman, 1988.

Research background and description of a comprehensive system to support school improvement through staff development.

Keller, J. M. "The Systematic Process of Motivational Design." *Performance and Instruction* 26:9 (November/December 1987): 1-7.

Description of the theory, background and application of the ARCS model: attention, relevance, confidence, satisfaction.

Kidd, J. R. *How Adults Learn*. New York: Association Press, 1959.

Early look at adults as learners, the learning process, the teaching/learning transaction.

Kolb, D. A. *Experiential Learning: Experience as the Source of Learning and Development*. Englewood Cliffs, NJ: Prentice-Hall, Inc., 1984.

A statement of the theory of experiential learning and its applications to education, work and adult development.

Korinek, L.; Schmid, R.; and McAdams, M. "Inservice Types and Best Practices." *Journal of Research and Development in Education* 18:2 (Winter 1985): 33-38.

Description of practices associated with effective programs for information transmission, skill acquisition and behavior change.

Lanier, J. E. and Little, J. W. "Research on Teacher Education." In *Handbook of Research on Teaching / Third Edition*, edited by Merlin C. Wittrock. New York: MacMillan Publishing Company, 1986, 527-569.

Primarily a review of research on teacher preparation programs, offers salient points about inservice continuing education. Notes reasons for programs, types, and nature of teacher involvement.

Little, J. W. "Norms of Collegiality and Experimentation: Workplace Conditions of School Success." *American Educational Research Journal* 19:3 (Fall 1982): 325-340.

Study of relatively successful and relatively unsuccessful schools revealed that in successful schools more than in unsuccessful ones, teachers valued and participated in norms of collegiality and continuous improvement and pursued a larger range of professional interactions with fellow teachers or administrators.

________. "Seductive Images and Organizational Realities in Professional Development." In *Rethinking School Improvement / Research, Craft, and Concept*, edited by Ann Lieberman. New York: Teachers College Press, 1986, 26-44.

A study of three elementary and three secondary schools in a large urban district, conducted in collaboration with the district's office of staff development. Describes school staff development approaches, dimensions of successful staff development, and argues that the "fit" or integration of staff development with major lines of program development and authority is both critical and problematic.

________. *The Persistence of Privacy: Autonomy and Initiative in Teachers' Professional Relations*. Paper presented at the Annual Meeting of the American Educational Research Association, Symposium on Teachers' Work and Teacher Culture, San Francisco, CA, March 1989.

An analysis of the accumulated literature on collegial relationships among teachers in schools, including studies of school culture, studies of specific group or team arrangements, and one-to-one teacher interactions. Examines the patterns of interaction and the variety of conditions of teacher performance and the commitment they produce.

Loucks-Horsley, S., et al. *Continuing to Learn / A Guidebook for Teacher Development*. Andover, ME: The Regional Laboratory for Educational Improvement of the Northeast and Islands and The National Staff Development Council, 1987.

Discussion of key attributes of successful staff development programs, approaches, evaluation, organizational structures, procedures and research.

Mahaffy, J. E. *Building the Collaborative School: A New Set of Norms*. Portland, OR: Northwest Regional Educational Laboratory, 1990.

A rationale for the development of collaboration and collegiality in schools as a necessary condition for substantive and lasting school improvement, plus a conceptual framework for how to develop collaboration and collegiality.

Miles, M. B. "Unraveling the Mystery of Institutionalization." *Educational Leadership* 41:3 (November 1983): 14-19.

Discussion of how institutionalization of a change effort takes place, including a general model of institutionalization.

Orlich, D. C. *A Handbook for Staff Development*. Federal Way, WA: The State Staff Development Council, 1984.

A review of research resulting in traits of successful and effective inservice programs, plus a checklist for program design.

Pink, W. T. "Staff Development for Urban School Improvement: Lessons Learned from Two Case Studies." *School Effectiveness and School Improvement: An International Journal of Research, Policy and Practice* 1:1 (January 1990): 41-60.

Two case studies of urban school improvement projects (one elementary, one secondary) are the sources for analysis of the importance of staff development to both the conceptualization and implementation of school improvement projects. Identifies common barriers to program effectiveness, arguing these should be addressed by schools and districts prior to initial planning for school improvement projects.

Purkey, S. C., and Smith, M. S. "Effective Schools: A Review." *The Elementary School Journal* 83:4 (March 1983): 427-453.

A critical review of the effective schools research, including description of the role of staff development programs.

Showers, B.; Joyce, B.; and Bennett, B. "Synthesis of Research on Staff Development: A Framework for Future Study and a State-of-the-Art Analysis." *Educational Leadership* 45:3 (February 1987): 77-87.

Discussion of findings from research and practical experience in staff development indicate the importance of program design in providing staff development that teachers can take back to their classrooms.

Simmons, J. M., and Schuette, M. K. "Strengthening Teachers' Reflective Decision Making." *Journal of Staff Development* 9:3 (Summer 1988): 18-27.

A framework for staff development which focuses on students' acquisition of language is presented as a means to increase teachers' cognitive complexity about the teaching-learning process.

Smith, R.M. *Learning How to Learn: Applied Theory for Adults*. Chicago: Follett Publishing Company, 1982.

A focus on theoretical bases, developing learning skills and understandings among adults, and providing training to help others learn how to learn. Extensive appendices charting the various learning styles instruments, other assessment devices, key procedures and exercises.

Sparks, D., and Loucks-Horsley, S. "Models of Staff Development." In *Handbook of Research on Teacher Education*, edited by W. R. Houston. New York: MacMillan Publishing Company, 1990, 234-250.

Extensive examination of research suggests five types of staff development models being used for teachers and provides information on underlying assumptions, theoretical/research underpinnings, phases of activity and illustrations/outcomes. Models include:
1) Individually-Guided Staff Development;
2) Observation/Assessment; 3) Involvement in a Development/Improvement Process; 4) Training; and 5) Inquiry.

Sparks, G. M. "Synthesis of Research on Staff Development for Effective Teaching." *Educational Leadership* 41:3 (November 1983): 65-72.

Examination of research regarding the content, context and processes of staff development programs designed to improve teaching practices. Includes listing of general recommendations about staff development programs for more effective teaching.

________. "The Effectiveness of Alternative Training Activities in Changing Teacher Practices." *American Educational Research Journal* 23:2 (Summer 1986): 217-225.

Report of a study of the relative effects of three approaches used to train teachers in the Stallings use-of-time model. Results indicate peer observation with feedback is more effective than workshops only or trainer coaching.

Stevenson, R. B. "Staff Development for Effective Secondary Schools: A Synthesis of Research." *Teaching & Teacher Education* 3:3 (1987): 233-248.

Research review of nine studies exhibiting critical dimensions of staff development and of effective schools to identify how staff development can support and facilitate secondary school improvement. Two principles to guide staff development design and implementation emerge.

Wade, R. K. "What Makes a Difference in Inservice Teacher Education? A Meta-Analysis of Research." *Educational Leadership* 42:4 (December 1984): 48-54.

Detailed analysis of 91 research documents (quantitative data, data for effect size presented, data related to major study question, subjects K-12 public school teachers) resulted in identification of 28 variables. Eight key variables are explored here: effect levels, duration, training group characteristics, location and scheduling, sponsorship, participant incentives, structure, and instructional techniques.

Wlodkowski, R. J. *Enhancing Adult Motivation to Learn: A Guide to Improving Instruction and Increasing Learner Achievement.* San Francisco: Jossey-Bass Publishers, 1985.

Includes a synthesis of motivational theory and research; an extensive examination of the six major factors that motivate learning (attitudes, needs, stimulation, affect, competence, reinforcement) within a time frame; and many useful strategies for increasing adult motivation to learn. Excellent information, suggestions for motivating adults.

Wood, F. H.; Thompson, S. R.; and Russell, F., Sr. "Designing Effective Staff Development Programs." In *Staff Development / Organization Development,* edited by Betty Dillon-Peterson. Alexandria, VA: Association for Supervision and Curriculum Development, 1981.

A model for developing staff development programs based on research review and delineation of school-based staff development assumptions and practices.

Zemke, R., and Zemke, S. "30 Things we Know for Sure About Adult Learning." *Training* 25:7 (July 1988): 57-61.

Considered a classic since its initial publication in 1981, this article highlights "things we know" about adult learners and their motivation, about designing curricula for adults, and about working with adults in the classroom.

General References

Acklund, R. "A Review of the Peer Coaching Literature." *Journal of Staff Development* 12:1 (Winter 1991): 22-27.

Examination of the literature on peer coaching as an integral part of staff development programs designed to increase the transference and use of new skills. Includes review of studies, characteristics, purposes and forms of peer coaching programs, plus issues regarding their design and implementation.

Brandt, R. S. (Ed.) *Coaching and Staff Development: Readings from Educational Leadership.* Alexandria, VA: Association for Supervision and Curriculum Development, 1989.

A collection of articles focusing on building a culture for professional growth, research on teaching, research on staff development, the Madeline Hunter model, collegiality and coaching.

Brookfield, S. D. *Understanding and Facilitating Adult Learning.* San Francisco: Jossey-Bass Publishers, 1986.

Excellent, exhaustive examination and analysis of current approaches to adult learning; a comprehensive review of how adults learn; ways to develop more creative, up-to-date adult education programs. Emphasizes a concept of facilitation that incorporates elements of challenge, confrontation and critical analysis of self and society. Includes case studies from a variety of settings.

Butler, J. A. "A Review of Adult Learning Theory and Staff Development Research." In *School Leader Development for School Improvement*, International School Improvement Project Technical Report #8, edited by R. E. Blum and J. A. Butler. Leuven, Belgium: ACCO, 1989.

Combined synthesis of adult learning principles and findings from staff development research resulting in a set of criteria against which to analyze the book's descriptions of 14 leader development programs in ten countries.

________; Olson, N. L.; and Olson, T. A. *Meaningful Professional Development in Our Schools: What the Research Suggests.* Review Draft. Portland, OR: Northwest Regional Educational Laboratory, 1991.

Examination of the need for professional development, its potential impact on teachers working with students at risk, the knowledge base and workplace conditions conducive to effective professional development.

Caldwell, S. D. (Ed.) *Staff Development: A Handbook of Effective Practices.* Oxford, OH: National Staff Development Council, 1989.

Selections focusing on the context in which staff development occurs, the processes of effective staff development, the content addressed in staff development efforts, the foundations of the speciality, and the competencies needed by staff developers.

Callan, M. F., and Hall, G. C. *Staff Development.* A publication of the Phi Delta Kappa Exemplary Practice Series, Center on Evaluation Development and Research, 1985.

A compendium of reprinted articles and book sections focusing on designing effective staff development programs, exemplary staff development practice, evaluating staff development programs and incorporating staff development into the school culture.

Cross, K. P. *Adults as Learners: Increasing Participation and Facilitating Learning.* San Francisco: Jossey-Bass Publishers, 1981.

Review of learning theory; examination of nature of participants in adult learning; suggested model of adult motivation for learning and implications for increasing participation; patterns of adult learning and development; how and what adults learn and want to learn; and a conceptual framework of characteristics of adults as learners. Strong information on motivation, implications.

Dillon-Peterson, B. (Ed.) *Staff Development / Organization Development.* Alexandria, VA: Association for Supervision and Curriculum Development, 1981.

An examination of the two areas of change and the interrelationship between them, including how individuals are affected, how to design effective staff development programs, and how to evaluate staff development.

Duke, D. L., and Corno, L. "Evaluating Staff Development." In *Staff Development / Organizational Development*, edited by Betty Dillon-Peterson. Alexandria, VA: Association for Supervision and Curriculum Development, 1981.

Application of basic evaluation theory to staff development issues such as political decisions about how and by whom evaluations will take place, guidelines for developing evaluations, an example and criteria for evaluating the evaluation.

Elam, S. M.; Cramer, J.; and Brodinsky, B. *Staff Development: Problems and Solutions*. An AASA Critical Issues Report. Arlington, VA: American Association of School Administrators, 1986.

Advice, examples, and ideas for the development of effective staff development programs. Includes a listing of "Elements of a Successful Staff Development Program."

Fullan, M. "Staff Development, Innovation, and Institutional Development." In *Changing School Culture Through Staff Development*, edited by Bruce Joyce. Alexandria, VA: Association for Supervision and Curriculum Development, 1990, 3-25.

A review of the literature on staff development, focusing on a comprehensive framework for classroom and school improvement, particularly the role of teacher-as-learner as a bridge between classroom and school improvements.

Griffin, G. A. "Implications of Research for Staff Development Programs." *Elementary School Journal* 83:4 (March 1983): 414-425.

A review of selected research studies focusing on the planning, conducting and evaluation of staff development programs. Topics covered include context, assessment, content and process.

Hall, G. E., and Hord, S. M. *Change in Schools: Facilitating the Process*. Ithica, NY: State University of New York Press, 1987.

Resulting from years of research on the processes of change, this book details the Concerns-Based Adoption Model, the Levels of Concern about an innovation, and the Innovation Configuration components of a comprehensive approach to tracking change.

Hord, S. M.; Rutherford, W. L.; Huling-Austin, L.; and Hall, G. E. *Taking Charge of Change*. Alexandria, VA: Association for Supervision and Curriculum Development, 1987.

Based on extensive research on the processes of change, an examination of roles and personal needs of people involved in change and strategies for managing a successful innovation process.

Howey, K. R. "Inservice Research—Six Functions of Staff Development: A Selective Review of the Literature." *R&DCTE Review: The Newsletter of the Research and Development Center for Teacher Education* 3:1-2 (1985): 9-10.

Description of six purposes of staff development derived from a research review: pedagogical development, understanding and discovery of self, cognitive development, theoretical development, professional development, and career development.

Huberman, A. M., and Miles, M. B. *Innovation Up Close: How School Improvement Works*. New York: Plenum Press, 1984.

Report of a three-year field study to examine the processes of school improvement. Important work in the systematic analysis of the process of change from adoption through early implementation, mastering the new practice, the role of assistance and stabilization.

Johnson, D. W., and Johnson, R. T. "Research Shows the Benefits of Adult Cooperation." *Educational Leadership* 45:3 (November 1987): 27-30.

Results of a meta-analysis describing how collegial support groups can facilitate increased productivity and happier working relationships in a school.

Joyce, B. (Ed.). *Changing School Culture Through Staff Development.* Alexandria, VA: Association for Supervision and Curriculum Development, 1990.

A survey of the knowledge base on staff development; discussion of the changing roles of the current shareholders in staff development; examination of staff development in England, Wales and Australia; and four examples of district-level approaches to staff development programs in Pittsburgh, Pennsylvania; Los Angeles, California; Lincoln, Nebraska; and Anchorage, Alaska.

Knowles, M. *The Modern Practice of Adult Education: Andragogy Versus Pedagogy.* Chicago, IL: Folklett Publishing Co., 1978.

This book focuses on an integrated learning theory called "andragogy," the art and science of helping adults learn. A classic in the field, it describes adult learning, technologies that support the process, and ways to apply the theory in developing learning programs for adults.

________. *The Adult Learner: A Neglected Species (2nd Edition).* Houston: Gulf Publishing Company, 1979.

Excellent review of learning theory, adult learning theory through the 1970s, teaching theory, and the application of learning and teaching theories to human resources development. Key reference for major learning theory work. Exposition of the theory of andragogy.

________, and Associates. *Andragogy in Action.* San Francisco: Jossey-Bass Publishers, 1984.

Brief review of adult learning theory called "andragogy," and a series of program and case descriptions of how a variety of organizations applied adult learning principles in the design, development and implementation of adult learning programs in business, industry, health care, education, etc.

Knox, A. B. *Adult Development and Learning: A Handbook on Individual Growth and Competence in the Adult Years.* San Francisco: Jossey-Bass Publishers, 1977.

A synthesis of findings from more than 1,000 studies of adult development and learning, plus information from diverse fields to create a handbook for practitioners in education and the helping professions.

Krupp, J. "Using the Power of the Principalship to Motivate Experienced Teachers." *Journal of Staff Development* 7:2 (Fall 1986): 100-111.

Description of stages of adult development and how principals' awareness of them affects teacher motivation.

Lawler, P. A. *The Keys to Adult Learning: Theory and Practical Strategies.* Philadelphia, PA: Research for Better Schools, 1991.

Examination of adult learning theory and strategies for teaching adults, with advice for adult educators stated as keys: understand and reduce anxiety, elicit and incorporate expectations, acknowledge and utilize experience, provide and encourage active participation, identify and incorporate relevant content, facilitate change and growth.

Lawrence, G. *A Synthesis of Research on the Effectiveness of Staff Development Programs.* Paper presented at the State of Ohio Department of Education Annual Conference on Inservice Education, Columbus, OH, May 1981.

A review of 59 studies sorted into four categories of objectives (cognitive, affective, performance, consequence) and analyzed to find inservice program contexts, materials, and procedures most effective in facilitating change in participants.

Levine, S. L. *Promoting Adult Growth in Schools: The Promise of Professional Development.* Boston: Allyn and Bacon, 1989.

Discussion of major theories of adult development (Erikson, Levinson, Gould, Kohlberg, Loevinger, Kegan) and an in-depth examination of the professional lives of four teachers, describing roles, actions and practices.

Lowe, J. *The Education of Adults: A World Perspective*. UNESCO: OISE Press, 1975.

Report of the 1972 UNESCO Third International Conference on Adult Education in Tokyo, summarizing position papers and giving general historical perspective. Cites expected trends in adult education across the globe.

Mazzarella, J. A. "Synthesis of Research on Staff Development." *Educational Leadership* 38:2 (November 1980): 182-185.

An early synthesis of research on staff development.

Odiorne, G. S. *Strategic Management of Human Resources*. San Francisco: Jossey-Bass Publishers, 1984.

Oja, S. N. "Adult Development is Implicit in Staff Development." *Journal of Staff Development* 1:2 (1980): 7-56.

Information about adult development (particularly as relevant to planning and implementation of staff development programs) and a framework for inservice programs based on developmental theory and research that can be used as a model for promoting teachers' growth to higher levels of ego, conceptual and moral development.

Owen, J. M.; Loucks-Horsley, S.; and Horsley, D. L. "Three Roles of Staff Development in Restructuring Schools." *Journal of Staff Development* 12:3 (Summer 1991): 10-14.

Description of three potential roles for staff development in contributing to and supporting the restructuring of schools, plus descriptions of the roles in practice as carried out in staff development activities at three locations.

Rosenholz, S. J. *Teachers' Workplace: The Social Organization of Schools*. New York: Longman, 1989.

Report of a study of elementary schools and the work of teachers within them, examining the finding that the social organization of schools "renders meaning to the nature of teaching." One component examined is opportunities for teacher learning.

Saxl, E. R.; Lieberman, A.; and Miles, M. B. "Help is at Hand: New Knowledge for Teachers as Staff Developers." *Journal of Staff Development* 8:1 (Spring 1987): 7-11.

Report of a study resulting in the identification of 18 skill areas that are key for personnel who work in the areas of staff development and school improvement.

Showers, B. *Transfer of Training: The Contribution of Coaching*. Eugene, OR: Center for Educational Policy and Management, 1983.

A study of 17 sixth, seventh, and eighth grade language arts and social studies teachers trained in models of teaching to determine the contribution of a coaching treatment to teachers' ability to transfer training into their active teaching repertoires. Results strongly support the power of coaching for facilitating teacher transfer of training but do not support the hypothesis that increased teacher transfer would result in improved student performance.

Shuell, T. J. "Phases of Meaningful Learning." *Review of Educational Research* 60:4 (Winter 1990): 531-547.

Suggests that a learner passes through specific stages in complex, meaningful learning. The nature of learning is fundamentally different at each stage:
1) initial phase is acquiring isolated facts that are interpreted in terms of preexisting schemata and add to existing knowledge structures; 2) intermediate phase where pieces are assembled into new schemata creating in turn more conceptual power until 3) terminal phase where the schemata are better integrated and function more autonomously (auto-

matic, unconscious, effortless performance because knowledge structures now control behavior more directly). There is little understanding about the nature of the transitions between these stages and what precipitates them.

Tracy, S. J. "Linking Teacher Growth and Student Growth." *The Clearing House* 64 (November/December 1990): 80-82.

Examines teacher career development, teachers as self-directed learners, teacher psychological development and student growth in terms of student performance based on brief research review.

Verduin, J. R. *Curriculum Building for Adult Learning*. Carbondale, IL: Southern Illinois University Press, 1980.

A general curriculum model for adult and continuing education courses: guides for more precise, coherent and fundable learning experiences for adult clients.

________; Miller, H. G.; and Greer, C. E. *Adults Teaching Adults: Principles and Strategies*. Austin, TX: Learning Concepts, 1977.

Practical advice for the development and carrying out of instruction for adults: specifying objectives, organizing instructional plans, designing learning activities, using community resources, variety of teaching techniques, devising test items and evaluating learning programs.

This publication is based on work sponsored by the U.S. Department of Education under contract number RP91002001. The content of this publication does not necessarily reflect the views or policies of the U.S. Department of Education, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.

SCHOOL IMPROVEMENT RESEARCH SERIES
"Research You Can Use"

Snapshot #21

Learning to Write and Assess Writing Quality

James Lick Middle School
San Francisco, California

Kathleen Cotton

Research Findings

Many of the findings identified in the effective schooling research base pertain to practices which (1) improve students' writing skills and (2) enhance their ability to judge the quality of written material. Some of the relevant classroom and schoolwide practices, as cited in *Effective Schooling Practices: A Research Synthesis / 1990 Update* (Northwest Regional Educational Laboratory, April 1990) include:

Classroom:

1.1.1 *Instruction is Guided by a Preplanned Curriculum*

1.3.1 *Students are Carefully Oriented to Lessons*

1.3.2 *Instruction is Clear and Focused*

d. Students have plenty of opportunity for guided and independent practice with new concepts and skills.

e. Students are taught strategies for learning and for remembering and applying what they have learned....

1.3.4 *Students Routinely Receive Feedback and Reinforcement Regarding Their Learning Progress*

a. Students receive immediate feedback on their in-class responses and written assignments; this feedback is simple and clear to help them understand and correct errors.

e. Teachers make use of peer evaluation techniques (e.g., in written composition) as a means of providing feedback and guidance to students.

1.5.1 *Learning Progress is Monitored Closely*

g. Teachers use assessment results not only to evaluate students but also for instructional diagnosis and to find out if teaching methods are working.

School:

2.3.2 *Administrators and Teachers Continually Strive to Improve Instructional Effectiveness*

2.3.3 *Staff Engage in Ongoing Professional Development and Collegial Learning Activities*

Northwest Regional Educational Laboratory
101 S.W. Main Street, Suite 500
Portland, Oregon 97204
Telephone (503) 275-9500

School Improvement Program

Situation

Named for a local philanthropist, James Lick Middle School is located in the Noe Valley neighborhood of San Francisco. It is one of 16 middle schools in the 65,000-student San Francisco Unified School District, which also includes 82 elementary schools and 12 senior high schools.

Approximately 560 students in grades 6-8 attend James Lick. Most do not come from the local neighborhood, but are bused to the school from Chinatown and from the Hunters Point/Bayview area of the city. The ethnic composition of the school is: Spanish-surname - 44 percent; other white - 7 percent; black - 33 percent; Chinese - 5 percent; Filipino - 4 percent; Japanese, Korean, and American Indian - less than one percent each; and other non-white - 5 percent. Fully 28 percent of the student population is non-English proficient (NEP) or limited-English proficient (LEP), with most of these students having Spanish or Chinese as their primary language.

Sixty percent of James Lick's students fall below the 40th percentile in reading and mathematics on the Comprehensive Test of Basic Skills and are thus designated as educationally disadvantaged. Eleven percent qualify for special education services. Nearly half are eligible for free or reduced-price lunches.

Context

Serious Problems, Major Changes

In 1982, a lawsuit brought against the school district by the National Association for the Advancement of Colored People (NAACP) resulted in a Federal Court Consent Decree. This Consent Decree mandated a variety of improvements, including school desegregation activities, upgrading of school facilities, and increases in student achievement. With the Consent Decree came additional resources to bring about the required improvements.

During the 1987-88 school year, as part of the second phase of the Consent Decree, James Lick began receiving funding to "reconstitute"; that is, to lay off its entire staff and hire new personnel. Current staff members were permitted to reapply for positions at the school, but the reconstitution process resulted in an almost-total turnover of staff. The current principal, Ms. Marylou Mendoza-Mason, was hired at this time and was instrumental in selecting new staff members.

The James Lick school building was also determined, in 1987, to require extensive renovations to meet the site standards for a Consent Decree-targeted middle school. In addition, asbestos-removal needs at an area high school led the district to move the staff and students of that school into the Noe Valley facility, displacing James Lick students first among three other middle school sites, then to a former elementary school in the Hunters Point/Bayview area, and finally back to the original site in February 1989.

These disruptions caused many families to take their children out of the school, resulting in a 40 percent drop in student enrollment. As noted in a descriptive flyer about the school:

> Only through the greatest effort on the part of staff and students have all of the disruptions been dealt with, but not at insignificant cost to the learning process....

Indeed, graphic displays of student achievement before, during, and since the reconstitution/relocation period reveal a drop in academic performance due to the stresses of moving and to changes in student composition. They also reveal, however, greater-than-expected improvements in achievement in the past two years—improvements that are all the more remarkable considering the increase in ethnic minority students, including many with few or no English language skills; James Lick's NEP/LEP population has increased from 18 to 28 percent since the pre-reconstitution days. In addition, overall student enrollment has nearly doubled, indicating a movement toward increased stability and public confidence in the school since it returned to the Noe Valley building.

Other notable characteristics and improvements at James Lick Middle School include:

- Affiliation with the Theodore Sizer **Coalition of Essential Schools**, including implementation of key Coalition principles, e.g., strong academic focus; student demonstration of mastery of essential course content; and building-level control of schedules, teaching materials, and curriculum

- Use of Consent Decree funds for **trips to Coalition schools** in New York and Pasadena to observe and learn from school staff

- A **restructuring effort**, which has placed all language arts and social studies students in two-hour blocks across grade levels. The restructuring has also provided for two hours of weekly released time for teachers, adjacent to their preparation periods, to facilitate greater collaboration

- An increase in **teacher input and influence regarding school decisions**, a change which reflects Ms. Mendoza-Mason's management style

- Weekly two-hour meetings designated for staff to work on **school improvement** projects and participate in **staff development** activities—sometimes presented by James Lick staff and sometimes facilitated by outside consultants

- **A GATE (Gifted and Talented Education) program** for sixth graders featuring a team-teaching structure and twice-weekly visits to the San Francisco Exploratorium for a math/science instructional block, as well as honors classes for seventh and eighth graders in math (including algebra), social studies, and language arts

- **A TEAMS Project**, in which teachers learn to conduct cooperative learning activities in their classrooms

- A **multicultural grant** received during the 1989-90 school year which provides resources for putting on a series of festivals highlighting the various cultures represented among James Lick's students—African American, Asian/Pacific Islander, Latin American, Native American, European American.

Those familiar with the effective schooling research will readily note that these elements—and the program-specific features that follow—are in keeping with findings from this research base.

The James Lick Writing Program

Work undertaken to upgrade students' writing skills and develop their ability to assess written products has been a particularly successful component of the school's improvement effort.

Efforts to improve James Lick's writing program began in 1986, when Consent Decree funds were made available for staff to engage the services of resource people from Project ACCESS, based at the University of California at Berkeley, to assist them in improving mathematics and language arts instruction. ACCESS staff provide training and technical assistance at the schoolwide, grade, and individual classroom levels at James Lick and other selected schools.

The initial goal of ACCESS activities was to enable minority students to improve their academic performance and eventually to enter and function successfully at U.C.-Berkeley; the program now has the more general goal of improving minority student academic performance so that these students will be more successful pursuing whatever educational or career path they may take.

ACCESS staff—and particularly resource specialist Patrick Delaney—have assisted James Lick staff to integrate the language arts and social studies curricula, to utilize a literature-based approach to reading and writing instruction, and to develop curriculum units in writing. They have also worked with both staff and students, teaching them to understand and apply holistic scoring principles to written material.

During the summer of 1990, ten of James Lick's 40 certified staff participated in the six-week summer session of the U.C.-Berkeley-based Bay Area Writing Project (BAWP). In operation since 1972, the BAWP emphasizes an instructional approach that gives attention to all phases of the writing process—prewriting activities, drafting, revising, editing, and publication of written products. This way of teaching writing contrasts with the older, product-oriented approach that focuses attention only on the final product, the finished composition.

BAWP participants engage in daily writing activities and sharing/critiquing sessions, as well as individual conferences with instructors. Returning to their classrooms, they then implement with their students an instructional program modeled on the activities in which they participated during the summer session. James Lick's recent school restructuring process, which ushered in the use of two-hour blocks for core classes, has facilitated the implementation of sustained writing periods and related activities as called for by the BAWP model.

Students receive instruction in various writing formats. These include the following, which are basic to the repertoire of a skilled writer and, as such, are periodically assessed as part of the statewide California Assessment Program:

- **Autobiographical Incident.** The writer tells a story from personal experience; the story may include dialogue, names of people or objects, sensory details, feelings or reflections, and other elements.
- **Evaluation.** The writer states a judgment of something (a movie, book, author, teacher, sports team, consumer object, etc.) and supports the judgment with evidence.
- **Firsthand Biography.** The writer presents a familiar, significant person and characterizes that person through physical description, dialogue, contrasts with other people, specific incidents, or typical activities.
- **Observational Writing.** The writer presents observed scenes, events or people, attempting to help readers imagine the observations. The writer's stance is that of an eyewitness reporter or detached observer.
- **Problem Solution.** The writer describes a problem and argues for one or more solutions, emphasizing the seriousness of the problem and importance of solving it.
- **Report of Information.** The writer presents him/herself as an authority on a subject and provides enough specific details about the subject to characterize it for readers.
- **Speculation About Causes or Effects.** The writer conjectures about the possible causes or effects of events, trends, or other phenomena and seeks to convince the reader of the plausibility of his/her speculations.
- **Story.** The writer tells an engaging, dramatic story that provides readers with a context, conflict or tension, and a satisfying conclusion. Narrative summary, dramatized incidents, descriptions, character development, dialogue, and other elements may be used.

Teachers also assign and work with students on the development of "I-Search" papers. These are papers documenting the process followed by students as they develop one of the kinds of written products cited above. In addition to identifying the sources for their ideas, I-Search paper assignments ask students to describe their personal feelings and responses to the topics they are researching and to the process of learning about those topics. Revealing these personal responses calls for a measure of trust on the part of students, and teachers seek to build that trust by modeling the process—that is, by writing "I-Search" papers themselves and sharing these with their students.

Students draft, revise, and edit their papers in the school's computer center, where they are able to take advantage of the capacity of word processing software to add, delete, and rearrange text easily. They also keep folders containing selected writing samples. These enable them to track their own writing progress, as well as being a useful diagnostic tool for use by teachers in identifying students' writing strengths and needs.

ACCESS staff have instructed James Lick staff in the application of a holistic scoring system utilizing a six-point scale, which they then use in order to assess students' written products. In addition, when students enter James Lick as sixth graders, they, too, are taught the concept of holistic scoring and how to apply the scale to their own and others' writing.

It is a source of gratification to Patrick Delaney and the James Lick staff that students have become skilled users of the scoring system; reviews have indicated a high degree of congruence between the scores assigned by seventh and eighth graders with scoring experience and those assigned by trained staff members. Students' expertise at writing assessment helps them to improve their own writing, as well as making them effective peer reviewers/advisors for one another.

The California Assessment Program (CAP) of the California Department of Education rates writing samples of eighth graders annually. Ratings are assigned for rhetorical effectiveness and use of writing conventions for each of the eight types of writing identified above. In 1989-90, the CAP scores of James Lick's eighth graders were a remarkable 56 points higher than those of the previous year's eighth graders—an increase which translates to one full point on the six-point holistic writing scale.

Principal Marylou Mendoza-Mason, Assistant Principal Judy Giampaoli, and ACCESS consultant Patrick Delaney credit several factors for this impressive growth in student writing skills. They include, in addition to the writing curriculum itself, the teaching skill and enthusiasm of the current James Lick staff, the school's program of staff development, the security provided by a stable school environment, and the sustained periods of time for student writing provided by the recent restructuring effort. It is expected that staff involvement with BAWP instructional strategies will result in further improvement of students' writing skills.

In the following descriptions of classroom practice, one can take note of the validated instructional practices listed in the opening section of this paper as these are utilized by teachers in the course of conducting writing program activities.

Practice: Writing and Assessing Writing

Peer Response Groups—Grade 8

Entering an eighth grade language arts class taught by Jennifer Sliney revealed students quietly working on their current writing assignment, an I-Search paper. Students had read books related to their topics and were now asked to write about their attitudes and feelings toward their chosen subjects. Ms. Sliney asked them to form two- or three-person response teams. She used an overhead projector to review guidelines for students to use in responding to one another's drafts. Respondents were instructed to use stars to indicate elements of one another's work that they liked, question marks to indicate unclear or irrelevant comments, and asterisks to indicate a need for a better "showing sentence," i.e., a more vividly descriptive one. Students were also instructed to conclude their reviews by noting something about the writer's work that they liked.

Ms. Sliney reminded students that "boring filler" weakens their writing and advised them to delete comments such as, "The reason I chose this topic is..." and instead to begin with something more compelling. As the students worked, Ms. Sliney circulated around the classroom, talking with groups and providing reminders to the whole class as needed.

Toward the end of the class period, Ms. Sliney asked several of the students to read first sentences from their I-Search drafts, now that they had the opportunity to rework these based on respondents' suggestions. Intended to catch readers' attention and inspire them to want to know more, examples of students' first sentences included:

- "Egyptian gods have mesmerized me since I was in the fourth grade."
- "My parents told me so much about Peru that I wanted to learn even more."
- "The 1906 earthquake was devastating."
- "Why are the Native Americans so important?"

Displays on the walls of Ms. Sliney's classroom provided reinforcement for the writing program and showcased examples of student work. One display, called "Have you heard a golden line?", offered examples of vivid, attention-getting sentences. Another presented examples of students' "Who Am I?" papers, in which students practiced using metaphors, describing themselves as animals, vehicles, or geographical features. Several well-written and nicely illustrated student papers concerning the Revolutionary War were also exhibited.

Holistic Scoring Review—Grade 7

Seventh grade teacher Lloyd Francis reviewed the holistic scoring process with his students, making certain that they understood the qualities and characteristics comprising each of the numerical designations. For example, he reminded students that stories eligible for a "5" or "6" rating are those which: (1) have plenty of dialogue, (2) contain adventure, (3) keep the reader involved, (4) have more than one character, (5) are of substantial length, and (6) exhibit the positive technical qualities of good paragraphing, accurate spelling, and neatness. The six scale points and their descriptors were also listed on newsprint pages posted at the front of the classroom.

Draft stories students had written were then returned to them with scores and comments included. Students looked over their papers and began making notes for the next day, when they would go to the computer lab and revise their stories based on reviewer's comments. As students were pursuing this activity, Mr. Francis circulated around the room, making positive comments to individuals and praising the class as a whole for their recent work. "You really outdid yourselves on this last assignment," he said, calling attention to the impressive number of high scores received by students' stories.

Like Mrs. Sliney's classroom, Mr. Francis's classroom walls displayed student work and other items that contributed to a positive learning environment, e.g., a list of story elements and their definitions and posters depicting the scientific, political, social, and artistic contributions of people from various ethnic backgrounds.

When asked if they liked to write stories and, if so, what kind of stories, students gave a variety of responses, including:

- "I like writing in this class most of the time."
- "I like writing fairy tales the best."
- "I don't like writing by hand, because my hand gets sore, but I like writing stories about space on the computer."
- "I don't like it that much, but if I become a secretary, I might have to write a lot, so it's ok."

Cooperative Learning in an Advanced ESL Class

Most of the students in Glorine Johnson's seventh grade English-as-a-Second-Language class had been receiving ESL instruction for two years and thus had quite a good command of English. About half these students were native speakers of Spanish, and half were native speakers of Chinese.

This classroom, too, was decorated with colorful displays of students' writings, drawings, and worksheets. Classroom rules and other lists were posted, written in English, Spanish, and Chinese. Many reference books, including picture-dictionaries and thesauruses, were available.

A participant in James Lick's TEAMS project, which provides training in conducting cooperative learning activities, Ms. Johnson was engaged in helping her students to develop academic, social, and audience skills in cooperative groups. This being the second day of a lesson involving reading, question-answering, writing, and reporting, students were working in their groups to prepare reports on the subject of the American Civil War. Within each group, every student was responsible for conducting research to answer one or two questions and then contributing their answers to the final group report.

Asked if working in a group helps them with their writing projects, students gave answers ranging from "Yes, because you can help each other," to "I don't like it when people on my team won't do their part," with most students giving positive responses.

During the report-outs, representatives from the different groups read their groups' reports, while Ms. Johnson gave the listeners pointers on practicing good audience skills—watching the speakers and applauding them at then end of their reports.

BAWP Strategies in a Bilingual ESL Class

Mallorie Baron, a teacher of Spanish-speaking NEP and LEP students, faces challenges like those presented to many teachers in bilingual classes: "I teach reading, language arts, math, social studies, and science," she says, "all in both English and Spanish, to kids at different grade levels and different levels of English-language ability."

Commercial posters and student drawings and written products were displayed in Ms. Baron's classroom, with most of the pictures labeled in Spanish. In keeping with the current schoolwide focus on ancient Egypt, pictures of Egyptian scenery, architecture, and artifacts decorated the room. Special prominence was given to a recent article in the local bilingual newspaper, *Mission Life*, which pictured James Lick students, including some from this class, with their responses to the question, "How do you feel about the war in the Persian Gulf?"

Of the four cooperative learning groups pursuing a story-writing activity, three were working in English and one, an NEP group, was interacting in Spanish. Ms. Baron indicated that each of the groups working in English included a balance of stronger and weaker English language skills among its members.

Groups received initial instructions in both English and Spanish. When speaking English, Ms. Baron acted out what she wanted students to do and used expansive gestures to enhance her meaning. While students pursued their writing projects, Ms. Baron circulated around the room, answering questions and giving reminders about features of English grammar and spelling, e.g., "Remember that the days of the week begin with capital letters....When we use i-n-g words, we also have to use the verb 'to be'...I am going, you are going."

A participant in the 1990 summer BAWP training, Ms. Baron uses many BAWP activities with her students. For example, students working in their groups could be seen developing and posting "story maps" and "story boards," which picture characters and events that they would then describe in their stories. Student drawings picturing figures of speech (e.g., a broken heart), were displayed with their English and Spanish captions. Ms. Baron also maintains writing portfolios containing selected examples of student written work to track development and identify areas needing extra attention.

Toward the end of the class period, representatives from the groups working in English reported on the stories they were preparing, with Ms. Baron giving them encouragement and praise for their efforts.

At the time of this visit to James Lick, district budgets were unusually tight and many teachers were facing layoffs. Despite these stresses, commitment to helping James Lick's students learn successfully was evident among all staff members observed and interviewed.

More information about James Lick Middle School and its writing program is available from Ms. Marylou Mendoza-Mason, Principal, or Ms. Judy Giampaoli, Assistant Principal, James Lick Middle School, 1220 Noe Street, San Francisco, CA 94114, (415) 695-5675.

This publication is based on work sponsored wholly, or in part, by the Office of Educational Research and Improvement (OERI), U.S. Department of Education, under Contract Number RP91002001. The content of this publication does not necessarily reflect the views of OERI, the Department, or any other agency of the U.S. Government.

Snapshot #22

Using School Time Productively

J. S. Chick Traditional School
Kansas City, Missouri

Kathleen Cotton

Research Findings

Research reveals a close relationship between the amount of time students spend engaged in appropriate learning activities and their levels of academic achievement.

Research also shows that a great deal of potential learning time is lost in schools and classrooms. Excessive absences and tardies, assemblies and programs which are too lengthy or held too frequently, and prolonged recess and break periods account for some of this loss.

Within classrooms, still more learning time is dissipated due to slow start-up of instruction at the beginning of the school day, lengthy transitions between classroom activities, interruptions (e.g., for loudspeaker announcements), off-task behavior, disciplinary matters, and dead time (i.e., periods of time allocated for instruction but during which no learning activities have been assigned to students).

Even when students are technically "on task," research has shown that extended periods of seatwork and other noninteractive learning activities are far less effective than interaction with teachers, aides, or other students in promoting learning gains.

Productive time use is such a critical component of effective schooling that two entire subsections are devoted to this topic in the Northwest Regional Educational Laboratory's *Effective Schooling Practices: A Research Synthesis / 1990 Update*. Researchers have found that in high-achieving *classrooms*, "Classroom Learning Time is Used Efficiently" (*Synthesis*, p. 8). Specifically, they note that teachers' planning, classroom management, grouping strategies, instructional pacing, student monitoring, activity transitions, seatwork assignments, and disciplinary functions are carried out in such a way as to maximize the amount and quality of instructional time.

Researchers have likewise found that in high-achieving *schools*, "School Time is Used for Learning" (p. 16), meaning that schoolwide policy and practice are focused on maximizing instructional time through providing appropriate staff development activities, minimizing administrative intrusions, emphasizing timeliness, and generally streamlining noninstructional activities.

The complete list of practices that comprise productive time use, as identified in the *Synthesis*, may be found at the end of this report. Virtually all of these are in operation at J. S. Chick Traditional School in Kansas City, Missouri.

Situation

THE KANSAS CITY, MISSOURI SCHOOL DISTRICT

Thirty-five thousand students attend the district's schools, which include 14 high schools, 12 middle schools, 52 elementary schools, one college preparatory school serving grades 6-12, two Montessori schools, and six special schools serving handicapped and other special needs students, such as teen parents and juvenile offenders. Sixty-four of the district's schools are magnet schools, which were established as part of a large-scale desegregation court order, and are focused on areas such as advanced technology, agribusiness, computers, foreign languages, science, visual and performing arts, and law and public service.

J. S. CHICK TRADITIONAL SCHOOL

A traditional (as opposed to magnet) school, J. S. Chick serves 357 students in grades K-5. The student population is approximately 97 percent African-American, and the teaching staff is evenly divided between African-American and white personnel.

With more than three-quarters of its students receiving free or reduced-priced school lunches, Chick qualifies for schoolwide Chapter 1 services, and a Chapter 1 coordinator works with teachers to identify and provide services to children in need.

Context

In 1985 Chick was one of the six poorest-performing schools in the district in terms of student academic achievement. To address the extreme need experienced by these six schools, the district made desegregation funds available to them for the implementation of the Striving for Excellence in the Performance of Students (S.T.E.P.S.) program. Initial S.T.E.P.S. activities involved intensive staff development designed to increase teachers' knowledge and application of effective schooling characteristics and practices, as identified by educational researchers. S.T.E.P.S. activities are credited with bringing about many of the academic and affective improvements which have taken place at Chick, and the school continues to receive maintenance-level S.T.E.P.S. resources.

Under the leadership of former principal, Dr. Ida H. Love (now Director of Elementary Schools for the district), and current principal, Ms. Audrey F. Bullard, several areas of emphasis have come to characterize Chick's approach to schooling. These include:

- The use of Chapter 1 funds to establish a **"double-staffed" classroom** (i.e., a classroom with two full-time teachers) for first graders identified as needing extra help to succeed.

- A small (ten-student) **"at risk" classroom** focused on bringing the skills of identified second and third graders up to grade level.

- Full-time Chapter 1 paraprofessional **teacher assistants in all other classrooms**. Ongoing training is provided to both teachers and paraprofessionals to develop skills in working together efficiently. (There is some Chapter 1 pull-out instruction at Chick, but it is minimal.)

- Schoolwide emphasis on taking a **team approach to teaching and learning**. This commitment to teaming is evident in the operation of a ten-person Site Planning Committee for school improvement, the school's seven teaching teams, the working relationships between teachers and their assistants, extensive use of cooperative learning groups in classrooms, and the support provided by regular students to their special education teammates in physical education classes.

- The establishment of **monthly and unit objectives**, which are posted in classrooms; monthly objectives are also communicated to parents by means of the school newsletter.

- A strong **emphasis on classroom management and instructional skills** for teachers, including emphasis on planning and designing lessons, pacing, monitoring, and assessment.

- **Directly teaching children how to use time efficiently** by providing them training and practice in moving expediently through breaks, activity transitions, and other procedural functions.

- A program of **parent involvement**, which includes use of parent helpers at the school and a training program to enable parents to support their children's learning at home.

- Implementation of an **African-centered curriculum**, which focuses on the "social, historical, cultural, and spiritual development of people of African descent" and emphasizes "expansion of those roots to meet the needs and demands of today's reality." Staff training to promote infusion of African-American culture into the curriculum was made possible by a grant from the Kansas City Power & Light Company.

- A focus on **enhancing student self-esteem**. In addition to self-esteem-building activities inherent in the school's African-centered curriculum activities, teachers carry out various feedback and reinforcement practices shown by research to foster positive self-regard.

- An **extended-day program** lasting one hour Monday through Thursday, during which students can work on their lessons, receive help from teachers, and/or participate in enrichment activities. The program was originally established for at-risk students, but any student may participate.

In 1988, Dr. Love prepared a brief article for the journal, *Educational Leadership*, titled "Getting the Most Out of the School Day" (vol. 45, no. 6, p. 82). In this article, Dr. Love noted that the improvements that have occurred at Chick are largely the result changes undertaken to make better use of school and classroom time. She cites the formation of new habits by staff and students—including starting classroom instruction right after the bell rings, making smooth transitions between subjects, streamlining recess and restroom breaks, and judicious selection of which assemblies and programs to hold—as major factors in conserving and maximizing instructional time. She concludes, "The key to successful learning is to allow the teacher to teach all day without breaking the teaching/learning cycle."

Current principal Audrey Bullard concurs: "The minute the bell rings, it's time for the teaching day to start," she says. To facilitate timely beginnings of the school day, Ms. Bullard has arranged for teacher assistants to meet students at the doors as they arrive. Teachers remain in classrooms, ready to receive students and begin instruction as soon as they enter.

Anecdotal evidence gathered from school staff, scores on student self-esteem measures, improved attendance levels, and a reduced incidence of discipline problems make clear that Chick's improvement activities are bringing about positive changes. Equally impressive is the performance of Chick students on standardized achievement tests. The following chart depicts the change in student performance on the Iowa Test of Basic Skills between 1985 and 1991 and compares 1991 averages to district norms:

Median NCE Scores

	J.S. Chick		District
	1985 Avg.	1991 Avg.	1991 Avg.
Reading	36	55.8	41.0
Language	52	57.8	56.6
Math	40	60.6	53.3

Practice: Productive Time Use in Elementary Classrooms

GRADE 2

Like all of Chick's classrooms, Ms. Leigh's second grade room displayed current objectives, student products, and seasonal artwork. At the time of the observation, Ms. Leigh and her teacher assistant were beginning a language arts lesson.

The anticipatory set was large group activity in which Ms. Leigh and the students developed a "cognitive map" of the word *neighbor*. Children—15 in this class—volunteered examples of things a neighbor is and does, and how one relates to a neighbor. To make certain that the children would move to their small group work "stations" expediently, Ms. Leigh checked their recollection of a direction she had given earlier? "What will the people at Station 1 be doing?" she asked. Children gave (accurate) choral responses, after which Ms. Leigh directed them to the stations, reminding them to move to their work areas quietly. The children were obviously accustomed to such transitions and quickly formed groups. Almost immediately, one group could be observed looking up words in the glossaries of their readers, while a second was engaged in choral reading, and a third pursued a workbook activity with the assistant. Though activities in two of the groups required talking, all students paid attention to the business of their own groups—a practice which is routinely taught and reinforced at Chick to maximize student task engagement.

Working with one group, Ms. Leigh invited students to make predictions about a story they were about to read—a story in which the new word, *neighbor*, would be featured. She then directed them to read the story silently and to think about which of their predictions turned out to be true and which did not. This was immediately followed by a choral reading of sections of the story, with reminders from Ms. Leigh to "read the story with the characters' *feelings*."

Ms. Leigh asked many questions about the plot, characters, and mood of the story, while moving about the room and giving warm, positive acknowledgments of students' responses. If any of the children began to be distracted from the activity, Ms. Leigh redirected them by calling positive attention to those who were following directions, e.g., "I like the way most of you are looking at the words up here on the board." Children responded rapidly and quietly when asked to move among the small group stations.

The transition from reading to the day's mathematics activity involved students putting their materials away and straightening up their work stations. While doing so, Ms. Leigh led them in a "sponge" activity—the recitation of the numbers from one to ten in Swahili—which increased instructional time and maintained students' attention rather than allowing them to become distracted during the transition. By the time they had recited the numbers several times, all tables and chairs were replaced, and the children were seated and ready for their next activity.

Subtraction was the focus of the day's math lesson. Ms. Leigh began by moving among the students and singing a rhythmic couplet about subtraction several time through:

> "Subtraction, subtraction, what's your
> function?
> Taking away and leaving the difference."

She then introduced a subtraction activity that involved the use of manipulatives—multicolored plastic clowns in baggies—which were passed out by the assistant while Ms. Leigh gave directions. As students began the activities, Ms. Leigh conserved teaching and learning time by sending students for a restroom break in groups of four or five, rather than releasing the whole class at once.

As students returned from the restroom, the assistant directed them to the proper work stations, and Ms. Leigh oriented them to the subtraction problem in progress. Using the manipulatives, students worked out the problems ("What is 7-5?" "What is 8-3?"). Individuals called on to respond were reminded to give their answers in complete sentences. They were also called upon to give definitions, e.g., "What does difference mean?" "Difference means what is left," answered a student.

One group then pursued an exercise in calendar subtraction (counting backward by a certain number of days from a given date), while another continued working problems with the manipulatives under the guidance of the assistant. Students in the calendar subtraction group took turns working problems at the large calendar on the board, receiving applause from the other students when correctly completing a problem.

This class ended with a "board race," in which students divide into teams, and representatives from the different teams race through a subtraction problem and kneel down to signal that they have finished. As math period ended, student attention was maintained with another choral recitation of the Swahili numbers.

GRADE 5

Assignments for lessons in each subject area, along with the objectives for those lessons, were written on the chalkboard in Ms. Franklin's fifth grade classroom. Also displayed were pictures depicting achievements of notable African-Americans in art, science, and politics; current news features; and exemplary student products.

As an anticipatory set for discussing a story about a person's experience of loneliness, Ms. Franklin engaged students in volunteering to complete the sentence, "When I was lonely, I felt..." She then asked them a series of questions about the story they had read. As in Ms. Leigh's class, every student seemed to be straining to raise his/her hand higher or wave it faster than other students in order to be recognized.

During the activities in this classroom, Ms. Franklin moved about the room continuously, gesturing expansively and speaking with a great deal of enthusiasm. These behaviors set a vigorous tone and pace for the many teacher-students interactions that took place.

Since the stated objective of the day's lesson was "to understand cause-effect relationships in order to understand emotion," Ms. Franklin asked the students for examples of cause-effect relationships. After a student volunteer defined cause-effect relationship ("It means what happened and why it happened"), other volunteers made cause-effect statements: "I'm smart, because I go to school"; "When I was in the library, I made too much noise, and the librarian threw me out!".

Ms. Franklin then directed students to open their journals and give examples of the figurative language they had used, first to describe a hot day and then to describe the feeling of having the "cold creeps." Again, responses were enthusiastic, with nearly everyone expressing eagerness to share.

An ensuing discussion of humor led students to identify many writers and comedians—particularly those of African-American heritage—who have delighted others with their humor.

All students responding to Ms. Franklin's questions were acknowledged with warmth and enthusiasm: "Excellent!" "I love this descriptive writing!"

With these activities for review and orientation, Ms. Franklin quickly redirected students' attention to the story in their reader about the character "Lonesome John." Students read sections of the story aloud, clearly and with near-theatrical expressiveness; there wasn't a mumbler in the group. Ms. Franklin's monitoring of students' comprehension took the form of frequent questions: "What does that mean?" "What's going on here?" Most student responses were immediate and accurate; when a student did hesitate or give an answer indicating incomplete understanding, Ms. Franklin stayed with him or her, redirecting her question until the student was able to answer correctly, whereupon he or she was praised briefly but sincerely.

Moving directly into a related activity, Ms. Franklin asked a series of fairly sophisticated questions requiring students to draw comparisons and contrasts between the present story and a previously read one, and to extrapolate from them ("What will probably happen next?"). Students were closely questioned both about story plots and the characters' emotions; Ms. Franklin was obviously concerned that the students have more than mere surface understanding of the characters and events.

The snappy pacing of this class continued as Ms. Franklin directed students to small groups for the next series of activities. Students plainly knew where they were to be and formed their groups smoothly. Ms. Franklin asked members of one group take turns reading the first page of the "humorous tales" they had been writing. Each reader was acknowledged warmly, and at the conclusion of the activity, Ms. Franklin said, with obvious sincerity, "Boys and girls, I am so proud of what you've done so far."

En route to the next activity, Ms. Franklin's transitional "sponge" involved asking students to comment on the meaning of the school's proverb of the week: "There is no medicine to cure hatred." While putting away their language arts materials and getting ready for the day's math lesson, students gave their interpretations of the proverb and of specific terms within it.

As Ms. Franklin introduced the math activity, her assistant set up a flipchart with "Problem Solving Tips" displayed. Ms. Franklin then reviewed with students the kinds of terms in story problems that signal the math operation to be used; for example, terms such as "sum" and "in all" indicate a problem in addition. She then called attention to story problems written out on the flipchart, while her assistant turned the pages and pointed to the different story problem elements as Ms. Franklin discussed them.

At Ms. Franklin's direction, students moved directly into small group work, with some of the students working problems in their math folders, while others made up story problems. As the story-problem-writing groups were called on, one student held up "math chips" (cardboard circles with numbers written on them) illustrating the problem, a second read the problem, and a third worked it, giving both the answer and the math operation used to arrive at it.

At the close of the math activity, Ms. Franklin quickly reviewed what they had covered during the lesson, while designated monitors picked up the math chips. Students were then invited to join with Ms. Franklin in what became a loud, cheerful, enthusiastic review of the math problem solving tips introduced at the beginning of the lesson.

Some general observations about these classes:

- The instructional pace was brisk but unhurried, and the teacher assistants were very good at saving time by arranging and distributing needed materials without drawing attention away from the teachers and their directions.
- During small group work, close monitoring by the teachers and their assistants insured that children remained attentive to the activities of their own group, even when activities of an adjacent group were louder.
- There was virtually no off-task behavior; an occasional general reminder ("Do I have all eyes up here?") was all that was required to maintain students' attention.
- In the course of activities in which students could volunteer to respond to teacher questions, nearly all students enthusiastically raised and waved their hands in response to nearly every question.
- Choral responses were given with so much enthusiasm and spirit as to be nearly deafening.
- By moving about the room, giving reminders and individual help, getting eye contact with students, and giving brief but warm physical and verbal encouragement, teachers and assistants made certain that no students withdrew into nonparticipation; everyone was engaged in every activity.

In a post-observation debriefing session, Ms. Bullard spoke of Chick's commitment to a team approach to teaching and learning. Teaming, she noted, is consistent with African cultural heritage and promotes cross-cultural understanding and respect. Just as important, it maximizes productive time use by dividing responsibilities, lowering the student-teacher ratio, and enabling teachers to share methods for increasing instructional efficiency with one another.

Finally, she spoke of her own role in working with her staff: "You have to move in the direction you want them to go, but in the end, it's their work and their team effort that make the program succeed."

More information about the programs at Chick is available from Ms. Audrey F. Bullard, Principal, J. S. Chick Traditional School, 4101 East 53rd Street, Kansas City, Missouri 64130, (816) 523-0320 or Dr. Ida H. Love, Director of Elementary Schools, School District of Kansas City, Missouri, 1211 McGee Street, 11th Floor, Kansas City, Missouri 64106-9905, (816) 871-7033.

Effective Practices Related to the Use of Time In Classrooms and Schools

Classroom Learning Time is Used Efficiently

a. Teachers allocate time to different content areas based on district and school goals.

b. Teachers keep noninstructional time to a minimum by beginning and ending lessons on time, keeping transition times short, and managing classrooms so as to minimize disruptive behavior.

c. Teachers set and maintain a brisk pace for instruction that remains consistent with thorough learning. New objectives are introduced as quickly as possible; clear start and stop cues help pace lessons according to specific time targets.

d. Teachers maintain awareness of the rest of the class when working with individuals or small groups and take action as necessary to keep all students on task.

e. To assure that time is used productively, learning activities are presented at a level that is neither too easy nor too difficult for the majority of students; adaptations are made to serve the needs of faster and slower learners.

f. Seatwork activities are kept productive through careful preparation, active supervision, and provision of assistance to students in such a way that others are not disturbed.

g. Students are encouraged to pace themselves. If they don't finish during class, they work on lessons before or after schools, during lunch or at other times so they keep up with what's going on in class.

h. Teachers regularly assign homework to students above the primary grades to extend learning time; assignments are corrected in class or graded and returned quickly.

School Time is Used for Learning

a. School events are scheduled to avoid disruption of learning time.

b. Everyone understands time-use priorities; school communications highlight the need for time for learning.

c. Time-use allocations are established for the various subjects taught, based on school and district priority goals; time-use guidelines are followed by staff.

d. The school calendar is organized to provide maximum learning time. Prior to adoption, new instructional programs or school procedures are evaluated according to their potential impact on learning time.

e. During the school day, unassigned time and time spent on noninstructional activities are minimal; loudspeaker announcements and other administrative intrusions are kept to a minimum and scheduled so as not to interfere with basic skills instruction.

f. The school day, classes, and other activities start and end on time.

g. Inservice activities are provided to help staff make appropriate time allocations and increase student time on task; improvement of classroom management skills is a focus of inservice activities.

h. Student pull-outs from regular classes are minimized, either for academic or nonacademic purposes. The amount of pull-out activity is monitored and corrective action taken as necessary to keep things in balance.

i. Extra learning time is provided for students who need or want it; students can get extra help outside of regular school hours.

j. Firm and enforced policies regarding tardies, absenteeism, and appropriate classroom behavior help to maximize instructional time.

From: *Effective Schooling Practices: A Research Synthesis / 1990 Update*, developed by staff of the School Improvement Program, Northwest Regional Educational Laboratory, Portland, Oregon, April 1990, pp. 8, 16-17.

This publication is based on work sponsored by the U.S. Department of Education under contract number RP91002001. The content of this publication does not necessarily reflect the views or policies of the U.S. Department of Education, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.

March 1992

SCHOOL IMPROVEMENT RESEARCH SERIES
"Research You Can Use"

Snapshot #23

Improving Student Performance Through Mastery Learning

College Place Middle School
Lynnwood, Washington

Carole Hunt and Kathleen Cotton

Research Findings

Staff of College Place Middle School are enthusiastic about their mastery learning program. From the beginning, their planning for mastery learning has been guided by research on effective schooling. Using the Northwest Regional Educational Laboratory publication, *Effective Schooling Practices: A Research Synthesis*, College Place staff have focused on the following research findings:

At the **classroom** level:

1.2.2 Classroom Learning Time is used Efficiently

1.3.4 Students Routinely Receive Feedback and Reinforcement Regarding their Learning Progress

1.5.1 Learning Progress is Monitored Closely

1.6.1 Students at Risk of School Failure are Given the Extra Time and Help They Need to Succeed

At the **school** level:

2.1.1 Everyone Emphasizes the Importance of Learning

2.1.2 The Curriculum is Based on Clear Goals and Objectives

2.2.2 School Time is Used for Learning

2.3.2 Administrators and Teachers Continually Strive to Improve the Instructional Program

2.3.3 Staff Engage in Ongoing Professional Development and Collegial Learning Activities

2.6.1 Students at Risk of School Failure are Provided Programs to Help Them Succeed

Situation

Directly west of beautiful Puget Sound and 15 miles north of Seattle is the Edmonds School District. Its 36 square miles of suburban area are home to a population of about 125,000 people. One of four junior high/middle schools in the district is College Place Middle School in Lynnwood, Washington, with an enrollment of 688 seventh and eighth grade students.

About 85 percent of the students are middle class, white/non-Hispanic, although there is a growing ethnic minority population that re-

Northwest Regional Educational Laboratory
101 S.W. Main Street, Suite 500
Portland, Oregon 97204
Telephone (503) 275-9500

School Improvement Program

flects current nationwide changes in demographics. Parents of College Place's students are among the thousands who commute daily to jobs in Seattle and work with such employers as Boeing and GTE, and the school district itself employs a staff of about 2,500.

The school sends 14 students to a central class for English as a Second Language, and 17 percent of the students receive free or reduced-priced lunches.

Context

Since 1984, College Place Middle School staff members have engaged in and benefitted from a great deal of professional development activity. In 1986 they began long-term participation in NWREL's *Onward To Excellence* (OTE) school improvement process. Beginning with an assessment of their school's current situation and needs, as called for by the OTE process, College Place staff developed a plan of action based on effective schooling research.

Another key event occurred in 1987, when College Place principal, Dr. Ann Foley, attended an Outcomes-Driven Developmental Model program designed by the Johnson City Central School District in New York. Dr. Foley became convinced that educators can "overcome the factors they believe are controlling them." Accordingly, College Place improvement activities have come to be driven by a philosophy grounded in three pivotal concepts from the effective schooling research base:

1. Almost all students can learn at a high level.
2. Success in learning promotes further success.
3. Educators control the conditions for success in learning.

In 1989, College Place staff applied for and were awarded a 21st Century School grant through a program operated by the office of the Washington Superintendent of Public Instruction. With this grant, they were able to set aside $50,000 for staff training to work toward their goals, including implementation of creative time-use plans. These plans, together with the provision of some additional training, have provided the basis for changes within the school.

Practice: Implementing Mastery Learning in a Middle School Setting

Mastery learning provides the theoretical base for College Place's instructional approach. The cornerstone of this effort is the staff's focus on productive ways of using time. "We took our *Onward to Excellence* training greatly to heart," says Dr. Foley. "It has driven our planning since 1986, when we first became involved with the program." In their initial work with NWREL trainers, College Place staff developed an action plan in which their goals included a high degree of mastery of subject matter and reteaching when necessary for mastery. To attain their goals, they began the process of restructuring their use of time.

In the school's mastery learning program, initial classroom instruction is conducted with the whole class and is teacher paced. Then, depending on learning needs, students engage in different activities during the daily 40-minute "M-E" (Mastery and Enrichment) period. During the M-E period, students may work toward mastery of a topic or, if they have achieved mastery of the current unit's learning objectives, they pursue enrichment activities within the topical area of the unit.

Students working toward mastery engage in a high degree of interactive, one-to-one learning with teachers and teaching assistants. In keeping with the findings from research on mastery learning, the instructional approach provided during the M-E period differs from the initial classroom instruction (e.g., different illustrative examples, different study questions), and learning is assessed using a different form of the test than was originally administered.

Students engaging in enrichment activities typically work at the "application" level of Bloom's taxonomy. They may study sign language, participate in a Great Books program, do special projects in technology, conduct research in the library, or carry out community-based projects. Each day of the week has a special academic focus, so staff members take turns helping students in their particular areas of expertise and providing enrichment work.

Each College Place teacher has one day per week when he/she does not have a class during the M-E period. On these days, teachers call in those students about whom they are particularly concerned and work with them to meet their learning needs. Since more than one teacher might wish to work with the same student at the same time, College Place faculty members must negotiate schedules with one another. As time permits, teachers also spend these "open" M-E periods working with students who have sought them out for help.

In addition, College Place provides a Study Club which meets after school three days a week for 50 minutes, offering students help from specific teachers and then providing bus transportation home. "Peer-teacher tutoring," that is, students helping other students, is another means by which students needing additional help can receive it.

There are also provisions for extended quarters and/or an extended year at College Place. At the end of the 1989-90 school year, for example, four teachers provided blocks of time during two weeks following the normal school closure date for 70 students to complete work—an opportunity which resulted in 170 grade changes.

In 1990-91, this structure was altered, with teachers meeting with students who had not completed their assigned coursework during four Saturdays in the spring. And during the 1991-92 year, two Saturdays at the end of each school quarter are set aside so that students can get the help they need to catch up on their work. Though initially required, participation in these extended learning activities is now voluntary; even so, the rate of student participation is high, and parents generally support and encourage their children's involvement.

In addition to the positive grade changes resulting from these extensions of learning time, incompletes have decreased considerably. For example, the 17 percent incidence of incompletes noted at the end of the first term of the 1990-91 school year had decreased to 10 percent by the end of the year.

Dr. Foley contends that the beneficial effects of M-E and other periods of extended learning time are largely due to the increase in one-to-one attention received by students. In addition to increased exposure to learning content, students also get a strong message that teachers care about them, believe they have the ability to do the work, and will hold them accountable for completing it. "Since we communicate to our students that they aren't finished until they have earned a B," says Dr. Foley, "they know that we hold high expectations for them--and that slacking off doesn't pay."

Nearly all College Place students are expected to do the same work—even the mainstreamed special education students, although some of these pursue an adapted version of the mastery curriculum. While some students complain that it has become more difficult to earn an A, they understand what is needed to do so: completing work that applies or extends the learning gained in the mastery units.

As Dr. Foley puts it, "We are not confusing higher expectations with making the work harder; rather, we are implementing practices, such as our use of time, in ways that are carefully designed to make those expectations attainable."

Looking at the changes in students' grades over time—and keeping in mind that standards for earning an A were raised during this time period—dramatic improvements are obvious:

	1984-88 Averages(%)	1991-92 Averages(%)
A & B	57-60	79-80
C	22-25	2-5
D & E	18	2
Incomplete		approx. 15
Special education students using adapted program		1

Mastery learning implemented in 1989

According to Nanna Brantigan, one of the teachers and leaders of the staff efforts in mastery learning, "We are breaking out of the box of traditional time use: we are changing school schedules, doing Mastery and Enrichment (M-E) and Study Club.

"Time use in the classroom has changed," she says. "We leave a day at the end of a unit as a flex-day for students to catch up or go ahead. It's difficult for us to move from the driven curriculum and covering units to the luxury of mastering materials. Teachers need to be willing to put time and effort into helping all students master the materials.

"We are working at blending our IEP students into the mainstream. The new view of time use eliminates the need to be coercive, erases the stigma of not being able to finish within a certain time frame, and dispenses with the penalties for slow learning.

"Another significant change that mastery learning has brought me is the way I now look at the curriculum. I feel the need to analyze what is being taught and why, to ask myself such questions as: 'What meaning does this curriculum have in terms of our desired outcomes?'

"Mastery Learning is a process, not a journey to a certain end," says Ms. Brantigan in conclusion. "You never arrive, you just keep on with the journey—it's positive, it's growth, and it's the norm. Through this process both the students and teachers are successful."

Special education teacher, Sheila Davis, augments this view, adding, "All kids can learn, given the right circumstances and enough time. Mastery learning seems to be ideal for integrating IEP students into the mainstream. Although I admit the reality of certain problems, we are working them out. Mastery learning forces teachers to pare down lessons and look at what is vital, and special education students are more likely to be successful when lessons are pared down and the students are given more time and second chances."

"Mastery Learning gives kids hope—especially those who struggle to learn," according to Judy Gaddy, a counselor at College Place. "The kids don't just give up, so what they have learned is not lost, but can be built upon. All of the students see themselves as more powerful and responsible for their own learning.

"More kids successfully complete summer school; we've learned that retention doesn't work A high percentage complete their work if given additional time and freedom from coercion. The teacher gives a description of what the end product should be, and the outcome depends on the student's work; they do the work and they get the grade. Under this system, the kids can evaluate and set priorities. The kids no longer automatically write off a class as hopeless. Instead, they are able to evaluate how 'incomplete' their 'incomplete' is and can make judgments. A second opportunity often provides the help needed to succeed."

For more information about College Place Middle School's program, contact Dr. Ann Foley, Principal, College Place Middle School, 7501 208th SW, Lynnwood, Washington 98036, (206) 670-7451.

This publication is based on work sponsored by the U.S. Department of Education under contract number RP91002001. The content of this publication does not necessarily reflect the views or policies of the U.S. Department of Education, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.

March 1992

Snapshot #24

Restructuring Curriculum to Promote Child-Initiated Activity

South Colby Elementary School
Port Orchard, Washington

Jan Jewett

Research Findings

Student investment in and willingness to use the processes and tools of learning can be significantly affected by the way schools structure and implement curriculum and instruction. This principle led staff of South Colby Elementary School in Port Orchard, Washington to undertake a restructuring process focused on research findings in early childhood education and effective school leadership and management practices. In *Effective Schooling Practices: A Research Synthesis / 1990 Update* (Northwest Regional Educational Laboratory), the following school-level research findings are identified:

2.1.2 The Curriculum is Based on Clear Goals and Objectives

c. Collaborative curriculum planning and decision making are typical. Special attention is focused on building continuity across grade levels and courses.

2.3.1 Strong Leadership Guides the Instructional Program

c. The leader has a clear understanding of the school's mission and is able to state it in direct, concrete terms. Instructional focus is established that unifies staff.

e. Building leaders know and can apply teaching and learning principles; they know research, legitimize it and foster its use in problem solving.

f. The principal and other leaders seek out innovative curricular programs, observe these, acquaint staff with them, and participate with staff in discussions about adopting or adapting them.

p. Leaders express an expectation and strong desire that instructional programs improve over time. Improvement strategies are organized and systematic; they are given high priority and visibility; implementation of new practices is carefully monitored; staff development is supported.

2.3.2 Administrators and Teachers Continually Strive to Improve Instructional Effectiveness

c. Priority goals for improvement are developed based on review of school performance data; goals give focus to planning and implementation.

e. The full staff is involved in planning for implementation; specific recommendations and guidelines provide the detail needed for good implementation; plans fit the local school context and conditions.

Situation

South Colby Elementary School is located near the outskirts of Port Orchard, Washington on the Kitsap Peninsula, an hour away from Tacoma. South Colby is one of ten elementary schools in the South Kitsap School District. A K-6 school, South Colby serves approximately 458 students, most of whom who are Caucasian and come from lower-middle- to middle-class homes.

Located in a semi-rural setting with few businesses nearby and few available resource agencies, South Colby has developed a strong identity in addressing the needs of children and families in its local community.

Context

Over the years, South Colby Elementary School has developed one of the finest academic programs in its district. Test scores have been high, and children have graduated with demonstrated skills in reading and math. The principal and staff became concerned, however, when evidence revealed that although children had acquired essential skills, they were not applying those skills in the context of their everyday lives.

John Lindley, South Colby's principal for the past fourteen years, reported that too many children were "turned off" to learning by the sixth grade, demonstrated poor attitudes towards learning and homework, and were unwilling to read. When surveyed, these children reported skills but no interest.

In 1987, Mr. Lindley was invited to sit on the National Academy of Science Forum on the Future of Children and Families and began to study research on retention, early childhood education, and alternative teaching methods. He found that these research findings were pertinent to the issues and concerns raised by South Colby staff.

Mr. Lindley organized the research materials into a notebook and began sharing the information with staff members. In addition to validating their concerns, the materials suggested new directions by outlining an alternative, research-based teaching approach characterized by child-centered, developmentally appropriate teaching practices. For example, research supports the use of learning activities for young children which are active, focused on concrete and personally relevant materials, and self-selected for approximately one hour of the school day.

Staff involvement in studying and discussing the research and program development guidelines expanded from the kindergarten and first grade teachers to include second and third grade teachers as well. In addition, the discussions progressed from casual conversations in the staff lounge to a more formal system of biweekly meetings before school.

Out of these activities was born a schoolwide commitment to developing a program which would engage the learning interests and abilities of children, while reducing retentions and special education referrals. The staff as a whole became familiar with the research base supporting basic principles of early childhood education and developmentally appropriate practice as a way of reconceptualizing the school's—and the children's—role in learning, curriculum development, and instruction.

In his role as a member of the team which developed a standards document for the National Association of Elementary School Principals, Mr. Lindley collected still more materials and information for use by his staff. The NAESP document, *Standards for Quality Programs for Young Children: Early Childhood Education and the Elementary School Principal*, raised complex issues for program developers, and when the Association of Washington School Principals indicated a need for help in addressing these issues, South Colby staff were able to bring their knowledge to bear on assisting in the revisions of the document, titled *Here They Come: Are We Ready?*

Focusing on South Colby's specific needs, staff prepared a systematic implementation strategy, a continuing staff development strategy, and a support strategy. Attending first to the kindergarten program and then to the first grade, staff worked to expand the age-appropriateness of the curriculum. For example, the daily schedule was redivided so that one third of the time each day was spent in large-group activities, one third in small-group activities, and one third in active learning opportunities where students could choose from among a number of open-ended learning centers. Additional changes included a commitment to expanding the whole language program and instituting heterogeneous grouping of students.

Resources for reorganizing the school's approach to curriculum and instructional implementation came from several sources. The staff development strategy included the decision to pursue a staff development grant, which has been awarded to South Colby from the Superintendent of Public Instruction each year from 1987 to 1991. This grant, the "Practitioner's Committee Workshop," has sent a team of six school staff members to meet once each year with a selected resource specialist for two days to develop and refine plans for implementation of developmentally appropriate practices which encourage child-initiated learning.

During each year, the principal and the teachers from the primary team have met with an early childhood expert to design and implement a K-3 program using resources from the High Scope Foundation and the National Association for the Education of Young Children as initial guidelines. Modifications made during these sessions have included redesign of classroom configurations and routines, teaching and questioning strategies, selection of materials and equipment, assessment, report card modification, increased grade-level planning, and continuing pursuit of open communication with parents. During the 1991-92 school year, staff have concentrated on improving their communication and coordination of teaching strategies in order to increase continuity and consistency for children.

Follow-up to these practitioner workshops has included review of team efforts at monthly all-staff meetings, the development of vertical (across grade level) teams for support, observation and assessment of teaching strategies, decision making and continuing plans for staff development and support, including reapplications for grants in successive years.

Additional resources were made available through changing instructional methods. Money previously invested in textbook and workbook series has been reallocated for the purchase of trade books which are used in the whole language approach, math manipulatives, and other materials which are incorporated into the learning centers.

Mr. Lindley requires that a portion of the purchasing decisions be made in K-6 vertical teams so that staff members will see things globally, rather than provincially. Teachers were encouraged to visit and observe other programs where developmentally appropriate practices were being implemented.

Finally, in the initial stages of this effort, school resources were used to purchase substitute teacher time so that involved staff could get together for the planning and coordination of an integrated effort.

As noted above, staff decided to undertake slow, thorough, methodical change, in which the kindergarten shifted to developmentally appropriate practice during the first year, while first grade teachers studied and observed. The shift was then expected to move one year at a time through the grade levels. This would ensure that children's environments were consistent with their prior experiences.

In practice, however, the staff above the first grade level "caught on fire" and weren't willing to wait to begin implementing the new approaches. Committees made up of teachers grouped vertically across teaching levels study cooperative learning techniques, whole language articulation, practitioner's workshop grant restructuring processes, and computer software coordination, in addition to holding more traditional grade-level meetings.

The staff now conceptualizes primary-level skills as a continuum and works to assist children in moving along that continuum. Classrooms have changed dramatically, and classroom structures and groupings have changed as well. The current goals of the staff include: (1) addressing the district-level "Student Learning Outcomes," which are currently organized according to grade level and are not articulated in ways which mesh well with the emergent "continuum" view in the school; and (2) developing staff communication skills which will enable them to take a comprehensive view of children and understand the school as a whole, rather than focusing exclusively on grade-level concerns.

Schoolwide Practices

South Colby Elementary School has made a commitment to schoolwide use of a whole language approach to reading; a thematic, integrated approach to curriculum; cooperative learning techniques; and math programs emphasizing the use of manipulatives, including strategies from *Box It and Bag It*, *Math In the Mind's Eye*, and *Math Their Way*. Children have many opportunities to be active, decision-making participants in classrooms; much less teacher-directed activity occurs. Primary classrooms are organized into interest centers which allow children to select and pursue topics of their own interest. Blocks and many other manipulatives are available in all kindergarten and first grade classrooms. Second grade classrooms offer open-ended interest centers which children can explore and utilize for at least 45 minutes daily. Curriculum is developed in thematic units around topics of interest to children and teachers.

South Colby is currently organized around traditional grade-level classrooms. All classes engage in cross-age tutoring, a practice which staff members feel has reduced competitive behaviors and encouraged mutual support among age groupings. During the 1991-92 school year, the school is operating a multi-age, fourth-through-sixth-grade classroom. Moving towards more multi-age groupings is of interest to the school staff.

School structures which affirm the school's emphasis on student cooperation, initiative and effort include monthly award assemblies at which two special awards are presented: the Principal's "Good Work Board" and "Super Students of the Month." For the Principal's Good Work Board, each classroom teacher selects children who have produced excellent work on one assignment, taking into consideration quality of ideas, neatness, accuracy and the student's ability and effort. Super Students of the Month are those children from each classroom, usually one or two per month, who typify the award title. Criteria are citizenship, work skills, positive behavior, responsibility, respect, effort, and cooperative attitude.

Ample evidence points to the success of these restructuring efforts in enabling the children to take charge and make use of their own learning skills. Staff perceptions indicate that children are happier, less competitive, bring in more materials and ideas from home to share with the school, and engage in far fewer conflicts in and out of class. Fewer referrals are made for special services, and the special education students are not as obviously set apart as in previous arrangements. Parents report that their children, of diverse temperaments and learning styles, have found success in school and that the teachers and structure have drawn out the children's skills and enhanced their confidence.

In addition, school staff have documented specific ways this approach has improved student outcomes:

- Attendance has improved significantly over the past several years. In 1987, over 40 letters were sent to families of students who had been absent at least ten times during the school year. In 1990-91, fewer than a dozen of these letters were sent.
- Discipline referrals have decreased over 60 percent during this time period, suggesting that, as children become accustomed to active learning and the regular use of cooperative learning and problem-solving strategies, negative interactions and experiences are reduced.
- Retentions have been reduced from 12 to 15 children in the K-3 range to no retentions in 1990-91.
- The Child Study Team, which previously conducted an average of sixty or seventy primary staffings annually for students who were referred for behavior or learning concerns, had only twelve referrals for primary students in 1990-91.
- Library usage has increased dramatically. Circulation averaged 100 books a week in 1987. In 1991-92, circulation is over 400

books a week, with a marked increase in books checked out by second, third, and fourth graders.

- Student performance has improved on publisher's basal-related magazine tests for reading. This is particularly significant since the school no longer utilizes the basal series on which these tests are based.

Classroom Practices: Opportunities for Child-Initiated Learning

KINDERGARTEN

A visit to Ann Warren's kindergarten room revealed a carefully organized environment replete with opportunities for creative play, exploration, and problem solving. Typical areas such as easels, water table, science, art, listening, manipulatives, blocks, library, and puzzles were supplemented by a large, well-equipped doll house, a store corner, a stage and dress-up area, a paper chain table, a junk art bin, a jigsaw puzzle table, a rabbit cage, and an antique typewriter.

Each of these centers or areas was presented in an open-ended way which did not require or demand a particular type of usage or response from children. Children circulated freely in this environment. Working singly, in pairs, or in small groups, they explored and manipulated materials as well as creating and constructing various projects of their own designs. The teacher moved quietly among the activities and facilitated or extended the children's pursuits.

Two children discovered the force of the hot air emanating from the heat vent near the window and began actively experimenting with materials to see which ones could be made to fly up into the air. The flying pieces of tissue paper attracted the interest of the teacher and other children, who came over to discuss and explore the implications of this inquiry process.

Mrs. Warren's schedule includes additional time for child-centered and child-selected activities. The materials in the room incorporate more numerous and more elaborate opportunities for open-ended exploration and discovery than in the past. The High Scope training has enabled her to work more productively with children on planning, recording, and reviewing their work. Mrs. Warren reports that the shifts in South Colby's approach to schooling have helped her to feel more confident and comfortable with the teaching methods she is using.

FIRST GRADE

The children in Mrs. Joan Mott's first grade classroom were engaged in the daily period known as DEAR (Drop Everything and Read). This period can involve solo or buddy reading in pairs. Children were spread throughout the room, comfortably positioned at various levels—on the floor, on cushions, or sitting at tables. Eight children were sitting in the reading area reading books—either trade books or those which had been made in the classroom. Six children were seated in pairs at tables, discussing and reading magazines. Others pursued different activities at various places throughout the room.

Mrs. Mott rotated among children, carrying a set of cards on a ring—one card for each child—which she used to record the answers children gave to a set of comprehension questions which she asked as she circulated. There was a moderate level of noise, as children were talking quietly to each other. Almost all discussion was focused on the reading activities in which children were engaged. One child monitored the time and turned off and on the lights to notify the class of the end of DEAR time. The teacher immediately handed out coupons to children who were in the "reading position"—sitting alone or in pairs with appropriate reading material.

FOURTH/FIFTH/SIXTH GRADE

This multi-age classroom entered the library in the afternoon with Mr. Steve Kaio-Maddox and Mrs. Sara Simmons for the daily period known as "Resource Base Learning." Although children function in many different heterogeneously organized groups in this classroom, during Resource Base Learning children are grouped by age level to pursue research skills. Research tasks founded on an analysis of the scope and sequence of skills targeted for fourth, fifth and sixth grades are integrated into the curriculum through a simulation game in which class members imagine themselves as a group from another planet traveling through space and preparing to land on Earth.

Each group studies different, grade-level-appropriate aspects of this earth landing. At this time, students were studying harvest myths and the history of Halloween. Once grouped in the library, each set of students was oriented to its task either by a teacher or the librarian. Fourth graders were developing research skills through the use of books as references, fifth graders were utilizing encyclopedias, and sixth graders were accessing indexes. After each group received an orientation, they pursued the identified tasks by exploring the available materials and discussing within each group the usefulness of the information obtained. Students discussed, asked questions, and made notes on the materials they reviewed.

Focusing on child-initiated activity and cooperative learning techniques has benefitted the staff at South Colby Elementary as well as the students. Staff members report that relationships are more collegial, teachers participate more in decision making, and the level of staff professionalism and leadership has risen. The principal's role has evolved in the direction of increased support and facilitation, as opposed to direction setting and "pushing." The school as a whole is benefitting from this focus on self-initiation.

For further information about South Colby's approach, contact John Lindley, Principal, South Colby Elementary School, 3281 Banner Road SE, Port Orchard, Washington, 98366, (206) 876-7339.

This publication is based on work sponsored by the U.S. Department of Education under contract number RP91002001. The content of this publication does not necessarily reflect the views or policies of the U.S. Department of Education, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.

March 1992